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The Sugar Bulletin

FFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U.S.A.

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 72 – No. 1

OCTOBER, 1993

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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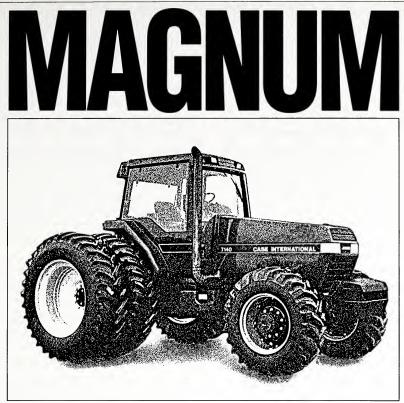
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UP FRONT WITH THE LEAGUE By Charles J. Melancon

This past month (August) was a relatively hectic month with the NAFTA, marketing allotments, the harvester/transportation project, and the planting demonstrations. I took the easy way out last month by allowing Dr. Freddie Martin, with LSU/Audubon Sugar Institute, to publish a speech he delivered in Australia. I didn't think I could get away with that two months in a row, so I figured I better sit down and draft an article for The Sugar Bulletin. Nannette came in and suggested that the Bulletin is read by all the processors and growers in the sugar industry, and then some. The fact that everyone could not serve on the Board of Directors of the League did not allow you to get first hand whatever information was given to the Board of Directors every month. Therefore, I may have solved my dilemma of what to write in The Sugar Bulletin. For now, I will try to give you, the growers and other interested parties, a briefing of our monthly meetings.

The USDA has promulgated new rules that deal with determination of acreage to be allowed for disaster payments. This new rule would not allow for plant cane, used for seed, to be included in determining disaster losses. In the 1989 freeze, had this criteria been used, it would have meant an approximate \$8 million reduction in disaster payments to Louisiana sugar farmers. The League is forwarding this information to the congressional delegation for assistance in trying to get this new rule reversed.

The League Board was briefed on the lawsuit that has been filed against the United States Department of Agriculture by several of the sugarbeet processors. The suit requests that the department furnish them with the data and information used to make the determination to implement marketing allotments. The suit, also, challenges the reason for implementation, contending that marketing allotments were put into place to avoid forfeitures only. The law suit was filed in Fargo, North Dakota. No date has been set, as yet, for the hearing of the suit.

Additionally, the same sugarbeet processors have filed an appeal with the administrative law judge in Washington over the allotments given to beet and sugar producing areas. The majority of the mills in Louisiana, as well as the Floridians, the Texans, and the Hawaiians have intervened in the appeal. This intervention has nothing to do with siding with the Department of Agriculture, or with the sugarbeet people. It only allows for the processors to be on record with the department in the event a ruling by the judge causes a reopening of the determination process of how the allotments are calculated. The bottom line: if a processor did not sign on as an intervenor, he would not have the opportunity to participate in any legal transactions that might evolve.

As by now, most all readers are aware the NAFTA agreement will be coming before congress between now and the end of the 1993 calendar year. The Board of the American Sugar Cane League has gone on record as being in opposition to NAFTA in its present form. If, in fact, a side-bar agreement resolving the concerns of the sugar industry in the United States are not

(Continued on page 18)

WASHINGTON UPDATE WITH DON WALLACE

Assistant for Agricultural and Rural Affairs Resigns

Miles Goggans, assistant to the President for Agricultural and Rural Affairs, announced his resignation September 1, 1993, in a speech in Little Rock. Formerly on the staff of Senator David Pryor, (D-Ark.), Goggans said that as his contribution to the Gore Task Force for Reinventing Government, he was recommending elimination of the position, which was created by Congress.

USDA announces the September Sugarcane Forecast

USDA announced that sugarcane production for September 1, 1993, is forecast at 30.9 million tons. This forecast is unchanged from August 1, and is 2 percent above 1992's output. 935.100 acres have been forecasted for harvest, the same acreage forecasted for August. This acreage is a 1 percent increase from a year ago. Louisiana growers are reporting shorter than normal cane due to the cool spring and dry conditions in August. Expectations for a good crop are still favorable. Other sugarcane producing states are reporting good growing conditions. Hawaii claims that rain may decrease their vields.

ASA Symposium Update: Kika de la Garza Speaks

The tenth annual International Sweetener Symposium held in mid-August near Lake Tahoe, California, presented informative panel discussions and talks by industry representatives. Kika de la Garza, (D-TX) Chairman of the House of Representatives Agriculture Committee, gave a kickoff address. He assured the participants that the recently passed budget plan will only financially impact middle America regarding the 4.3-cent tax increase on gasoline, effective October 1, 1993. Congress reduced the hard hits on the Agriculture budget from the Administration's proposed \$7 billion to \$3 billion over 5 years.

Mr. de la Garza anticipates that the Farm Bill will be up for renewal in 1995, as expected. He warned the sweetener industry that the complexion of the House and Senate is now more antiagriculture noting the recent defeat of the honey program.

Mr. de la Garza stated his support for NAFTA. He believes Americans should look at NAFTA as an opportunity for Americans to fulfill increased demands for U.S. exports in Mexico and increased demands for jobs at home. He states that NAFTA will raise the standard of living in Mexico by the creation of jobs, instead of the current situation which encourages Mexican migration to the U.S.

ASA Symposium Update Continues:

Tom Kay, President of Kay Associates, and a trade consultant to ASA, held a question and answer session with Dr. Jose Pinto, Vice President of the Camra Nacional de la Industria Azucarera de Mexico (Mexican Sugar Industry Association). Dr. Pinto stated that the Mexican Sugar industry had no problem in accepting the position of the U.S. sugar industry on NAFTA regarding a change in the surplus producer definition. However, the Mexican government believes that no concluded negotiations should be reopened. Dr. Pinto also noted that most Mexican sugar producers face similar problems as their U.S. counterparts. All Mexican

(Continued on page 14)

FARM NOTES By Dr. Charley Richard

CROP REPORT — MUD FREE CANE

The crop of 1993 can be remembered as one that has endured several extremes concerning temperature and rainfall. First, the crop got off to an early start with good germination in many areas of the belt. Then came the March 12-14 freeze which killed nearly the entire state crop back to the ground. Then the rains continued and fertilization was delayed. Despite all this, the crop still appeared to have a fighting chance to make at least average yields as it approached the summer growth months. Everyone recognized the large percentage of old stubble that is present in 1993, as a result of the 1989 freeze. which forced nearly half of the 1991 acreage to be plant cane. It was also recognized that older stubble suffers more than plant cane from nearly any stress factor, and therefore, there was little reason to predict anything more than average yields. Then came the drought and above average temperatures for much of the northern and western portions of the cane belt along with isolated areas within the southeastern part of the belt. Wherever there was a shortage of rain, there now is an abundance of short cane. This short cane has affected planting ratios, and will certainly have an effect on yields when the harvest season starts in less than one month. Older stubble on some farms does not even reach the carriage chain of the harvester, and growers are now faced with the dilemma of whether they should use Polado. The dry weather has also had an effect on the use of clean seed within the industry. Many growers within the affected areas are not using the seed acres they had intended to use because the cane is often too short. Instead, some growers are simply using the tallest seed they have which may or may not be the cleanest seed. Their decision will affect the yields that will result from this planting for an entire crop cycle. Therefore, it is hoped that the seed that is being used is at least adequately free of diseases.

As dry as portions of the northern and western cane belt now find themselves in, as of September 10, the southeastern portion of the state has barely started planting because of too much rain. At the League Office in Thibodaux, seven inches of rain have been recorded in 10 of the last 13 days. While growers in the far western areas of the cane belt are now finishing their planting, growers along lower Bayou Lafourche and the lower Mississippi River haven't even started.

Because of the reduced tonnage in the drought affected areas, most mills have delayed the opening of the harvest season by at least one week. This may help increase tonnage by a small amount if adequate rains do fall. A few growers in the northern area have already started to pump water on the cane in an effort to add some extra tonnage.

The predictions at this time are that the industry will produce fewer tons of cane per acre than last year. With an average yield of sugar per ton of cane, and approximately 350,000 acres that are expected to be harvested, it is felt that the industry might still produce as much as 800,000 tons of sugar but probably less than 850,000. During 1992, the state produced some 880,000 tons of sugar despite the hurricane and the large amount of rain experienced during the harvesting season.

(Continued on page 19)

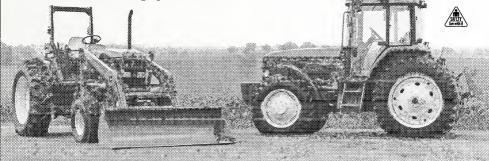
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THE BATON ROUGE LINE

By Tom and Linda Spradley

CONSTITUTIONAL AMENDMENTS OF THE 1993 SPECIAL AND REGULAR SESSIONS OF THE LOUISIANA LEGISLATURE

The following constitutional amendments will be placed on the ballot for voter consideration in a special election to be held on October 16, 1993:

EXPENDITURE LIMIT AND CAPITAL OUTLAY

HOUSE BILL 148 (Steve Theriot) — Would tighten procedures for determining the state expenditure limit and developing the capital outlay budget.

The amendment requires that adjustment of the expenditure limit be made by passage of a "specific" legislative instrument approved by a two-thirds vote of the Legislature. It excludes from the expenditure limit appropriations of funds from (1) the federal government, (2) self-generated collections of higher education boards, and (3) interagency transfers.

The amendment, also, requires that all projects in the capital outlay budget be evaluated through a study reviewing the need for the project and its estimated construction and operating costs through criteria established by statute. The criteria can only be altered by passage of a "separate" legislative instrument approved by a two-thirds vote of the Legislature. Finally, the amendment requires the governor's five-year capital outlay budget to list the first year's projects (except those funded through the Transportation Trust Fund) in priority order based on study results.

HOMESTEAD EXEMPTION TO PRIMARY RESIDENCE

HOUSE BILL 269 (Stelly) — Would extend the homestead exemption to a

primary residence, including a mobile home, regardless of who owns the land upon which the home is sited. The exemption would not apply to the land if the home owner does not own the land.

NONRECURRING REVENUES FOR DEBT RETIREMENT

SENATE BILL 27 (Special Session) and SENATE BILL 86 (Hainkel) -Would require the Revenue Estimating Conference to designate in its official forecast those revenues which are nonrecurring. Such designation may only be charged by law enacted by a twothirds vote of the Legislature. Those monies designated in the official forecast as nonrecurring shall be used exclusively for the retirement and defeasement of bonds. NOTE: IF APPROVED BY THE VOTERS. SENATE BILL 27 IS AUTOMATICALLY REPEALED AND OF NO EFFECT IF SENATE BILL 86 IS ALSO APPROVED BY THE VOTERS IN THE SAME ELECTION.

REGULAR LEGISLATIVE SESSIONS

SENATE BILL 83 (Kelly) — Would require the prefiling of bills by the Friday preceding the first day of a regular session and thereafter restrict legislators to only five additional bills without approval of the respective house. The amendment restricts the Legislature to consideration of bills on concurrence or *(Continued on page 22)*

1 0

Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

ON REPORTING POLLUTANT RELEASES

By the time this bulletin is published, everyone working in the Louisiana Sugarcane industry will be preoccupied with the complicated tasks of getting crops, equipment, and factories on line for the 1993 grinding season. Some thought should, also, be given to handling unforeseen incidents of pollutant releases to the environment.

Some of the causes of unexpected pollutant releases in the past have been due to negligence, such as deferred maintenance on critical items of equipment of impoundment levees, or perhaps someone simply forgetting to turn off a manually operated pump. Other past releases have been due to "natural" causes such as excessive rainfall, power failure, and transportation accidents. Whether accidental or not, unpermitted releases of pollutants to the air, waters or land of Louisiana, in amounts sufficient to cause environmental degradation, must be reported to state authorities.

Reporting requirements and penalties for nonreporting have been in effect for many years. Many incidents involving releases of significant amounts of pollutant have gone unreported, because of confusion about what is a significant amount, to whom an incident should be reported, and when. However, new Louisiana regulations on pollutant releases were promulgated on August 20, 1993 (LAC 33:1, Chapter 39; LAC 33:111.927 and 5107; LAC 33:XI.713; and LAC 33:V.105). These regulations establish a uniform procedure for reporting releases causing an emergency situation, and also revise and standardize procedures for reporting significant releases that do not cause an "emergency" situation.

Any releases that "could reasonably be expected to endanger the health or safety of the public, cause significant adverse impact to the land, water or air environment, or cause severe damage to property" is defined as an "emergency" condition. Release of a cylinder of chlorine gas or discharge of an overturned gasoline tank truck would obviously be in the "emergency" category. When a release causes emergency conditions, the discharger must notify immediately the DPS 24-hour Louisiana **Emergency Hazardous Materials** Hotline by telephone at 504/925-6595 (collect calls accepted 24-hours a day) giving details of the incident, "but in no case later than one hour after learning of the discharge." Telephone reporting does not relieve responsibility for submitting any written reports on an incident, as required by law.

The new regulations on reporting also contain guidance on determining how much pollutant release is significant (and thus must be reported) even though no "emergency" situation exists. The new rule contains a long list of pollutants, mostly hazardous chemicals, with an indication of the amount that constitutes a "reportable" quantity. Interestingly, one of the hazardous materials listed is saccharin, with 100 pounds or more as the mandatory reporting threshold. Other materials on the list include:

(Continued on page 23)

GUIDELINES FOR BURNING SUGARCANE

- 1. Always use common sense in relation to burning.
- Never burn in the late afternoon when the air is "humid & heavy." Smoke will not readily dissipate during those times. Burn during mid day when smoke rises; avoiding dangerous and/or nuisance situations.
- 3. When possible, burn slowly (backburn) to minimize the volume of smoke.
- 4. Avoid burning when wind will blow smoke across heavily traveled highways.
- 5. Use extreme caution when burning near homes, subdivisions and schools. Attempts should be made to avoid or minimize smoke drifting into those areas.
- 6. Construct "firebreaks" to control fires especially later in the harvest season when grass is dry.
- 7. Always keep adequate water and firefighting equipment on hand. Tractor mounted spray tanks with a good hose and nozzle are excellent for controlling fires.
- 8. Always use common sense when burning sugarcane.

GUIDELINES FOR TRANSPORTING SUGARCANE

- 1. Have hauling equipment adequately insured. If sugarcane is transported by contract hauler, get certification of proof of insurance.
- 2. Have current inspection stickers on trucks and trailers.
- 3. Send all equipment operators to pre-harvest safety classes conducted by the Louisiana Cooperative Extension Service in those parishes where available.
- 4. Check lugs, bolts, tires, lights etc. daily. Keep equipment mechanically safe.
- 5. Do not overload or overstack, stay within weight and height limits.
- 6. Field tractors and trailers should stay off the highways where ever possible. Definitely stay off the highways during times of poor visibility.
- 7. Do not form a convoy of tractor and trailer units, leave sufficient space between units to allow other vehicles to pass in a safe manner.
- 8. Remove or trim cane stalks hanging out of trailer and avoid having loose dangling cables or chains.
- 9. Minimize field mud tracked on public highways. If for some reason beyond control, mud accumulates on highways, remove with a grader blade or scraping periodically.
- 10. Obey all highway traffic laws and report to owners or mills anyone operating in a reckless manner.
- 11. Instruct all equipment operators who are on public highways to be courteous to the public at all times. In doing so, we can convey to others our concern for safety to the general public.

IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

FACTORY DATA

A regular subject in this series is the quality of data, especially analytical data, that the factories use to assess their operations. This week, at the Audubon Sugar Institute, we are teaching a short course for bench chemists in which we are going through the analytical methods essential for acquisition of good data. The role of the bench chemist is to provide the factory management with reliable analytical data on the composition of the various streams in the factory. How the data are used to compile the regular factory reports is another matter.

The data required for good assessment of factory operations are a combination of compositional (analytical) data and quantity (weight) data. The chemist in the laboratory is primarily responsible for the former, and the quality of the data is to a major extent determined by the laboratory facilities and the training and experience of the personnel. This assumes that the material arriving at the laboratory for analysis is representative of what is in process, another matter entirely since the sampling is probably the most important source of error. Although there is no formalized set of analytical procedures to be used in all the Louisiana mills, there is a movement towards standardization. However, the practicality of standardization of procedures, under present circumstances, is debatable since the subject is in a considerable flux due to changes in regulations and technology. The International Commission for Uniform Methods of Sugar Analysis (ICUMSA) is currently completing a new manual of procedures, but many of these are unsuitable for us since they are based on the use of lead containing reagents. Pol measurements using lead substitute reagents are a necessary development, but may only be stop-gaps until other, quite different, analytical procedures are fully developed. Significant developments are of analytical methods based on chromatographic and spectroscopic procedures. The former (hplc) have been developed to the stage where they can be routinely used, but they are still too expensive. in terms of equipment, maintenance and training of the analyst, and are probably inappropriate for routine factory use at this time.

The spectroscopic methods, specifically near infra red (nir) transmittance and reflectance, have enormous potential, especially for routine process control. Much of the basic research on these methods have been completed, and the next stage is the establishment of the desired performance characteristics of instruments for routine use. This technique has the potential of performing a detailed analysis (brix, sucrose, reducing sugars, etc. and perhaps even dextran) on a single sample without the use of any chemical treatment. A simple filtration step to remove dirt may be all the pretreatment that is necessary. The results are produced from a computer analysis of the spectroscopic data, (Continued on page 25)

The Effects of NAFTA (as proposed) on the Louisiana Sugar Industry

(Continuation from September, 1993 issue)

by Tim Burley

The Mexican Sugar Industry

Mexico's sugar industry produces approximately four times as much sugarcane annually as does Louisiana. The 1991/92 Mexican sugarcane crop produced 3.5 million tons of raw sugar, compared to 880,271 tons produced in Louisiana in 1992 (Roney, 1992 b; ASCL, 1993).

Ownership

Mexican sugar mills are privately owned businesses. A major use for their product (1.5 million pounds of raw sugar) is soft drink beverages (Pamalette, 1992). Forty to fifty percent of Mexico's bottling plants are owned by sugar mill owners (Roney, 1992 b). In light of this apparent oligopolistic scenario, parties holding financial interests in this industry would be hard pressed to justify changing such a lucrative business investment. Furthermore, the proposed NAFTA creates a scenario potentially more profitable for the Mexican sugar industry.

Owners Intentions

Ironically, the bottlers (sugar mill owners) are considering changing from sugar as a sweetener source to high fructose corn sweetener (HFCS), primarily because the latter is less expensive. HFCS is a syrup based sweetener derived from corn. There is an abundant supply of corn available in the United States, and it can also be produced in Mexico. Such a conversion, as has been completed in the United States beverage industry (Coca-Cola, Pepsi, etc.), could be accomplished in 5 to 8 years (Roney, 1992 b). If the conversion to HFCS as a primary sweetener in soft drinks is accomplished, there will be a huge surplus of sugar on the Mexican market. According to a USDA prediction, this surplus will amount to 1.2 million tons of Mexican sugar by 1996, the third year of NAFTA.

Having briefly described the Mexican industry, some comments on the provision of NAFTA, governing trade in sugar are in order.

(Agriculture) Provision of NAFTA Pertaining to Mexican Sugar

As stated earlier, we now return to the basis of this paper. The proposed NAFTA calls for the gradual liberalization, over a 15 year period, of bilateral trade in sugar between Mexico and the United States (Roney, 1992 b). This liberalization process, for increasing imports of Mexican sugar is designed in a stair-step fashion and is proposed to be accomplished in the following manner:

United States Obligations

- 1. In years one through six, the United States \$0.16/lb. second tier tariff relative to Mexican sugar will be reduced by fifteen percent.
- 2. During years seven through fifteen, the \$0.136/lb. second tier tariff relative to Mexican sugar will be reduced to zero.
- 3. In years one through six, the United States will allow 7,258 metric tons (MT) of Mexican raw sugar duty free, unless:

(Continued on page 27)

BUS TRIP 1994

Because of the extreme interest in harvesting and loading equipment, which can improve the quality of delivered cane, the League is planning a field trip to the Florida sugar industry. Exact dates and the final itinerary have not yet been set, but it is expected that the trip will take place during late January or early February. We expect to see different brands of combine harvesters, hand harvesting, continuous loaders, and various cane transport equipment. The cost of the trip should be comparable to previous League bus trips, and will be approximately seven days in duration.

We will also attempt to see some of the vegetable and citrus industries, as well as a stop at one of the many tourist spots in Florida.

Since there will probably be many people interested in making the trip, we will handle reservations on a first-come, first-served basis. If you are at all interested in making this trip, please fill out this form and return it to the League office as soon as possible.

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WASHINGTON UPDATE

sugar mills are now privately owned, but eight of them are either in Chapter 11 bankruptcy or have closed.

NAFTA Update

U.S. Trade Officials hope to have the North American Free Trade Agreement in force by January 1, 1994. However, to do so will require congressional approval, and this could prove difficult given the recent opposition to the pact from key Democrats. Republicans, by and large, support the measure, but a number of lawmakers, from all over the political spectrum, oppose the trade agreement, arguing that it will cost U.S. jobs and induce companies to move to Mexico to take advantage of low labor costs and lose environmental controls. Many senators are taking a wait-and-see attitude toward the pact, designed to phase out trade restrictions between the

(Continued from page 5)

United States, Canada, and Mexico over a 15-year period. On September 14, 1993, President Clinton kicked off a major effort for the adoption of NAFTA. The President held a kickoff rally in New Orleans on September 15.

ESPY Travels To Mexico

U. S. Secretary of Agriculture Mike Espy traveled to Mexico to meet with the Agriculture Minister Gonzales, Trade Minister Puche, and Mexican President Salinas on September 4, 1993. Secretary Espy was told that the negotiations are over, and that they are not going to reopen the agreement. Louisiana Senators J. Bennett Johnston and John Breaux wrote the U. S. Trade Representative Mikey Kantor and Agriculture Secretary Mike Espy of the sugar industry's concerns. Both letters are as follows . . .

(Continued on page 15)



WASHINGTON UPDATE

The Honorable Mickey Kantor United States Trade Representative 600 17th Street, N.W. Washington, D.C. 20506

Dear Mr. Ambassador:

I would hope to support the North American Free Trade Agreement, but like a number of Senators cannot now do so because of the peril which this might inflict upon the sugar industry.

Sugarcane is the principal industry in seven Louisiana parishes, and in 1991 was grown in twenty-one, with a gross farm value of almost \$200 million and a total value of over \$320 million.

Essentially, the position I outlined above has been communicated to the Administration by John Breaux and Larry Craig, co-chairman of the Sweetener Caucus, by Max Baucus and others.

We believe NAFTA is fixable by an enforceable side agreement relative to the definition of "sweetener", but the window for action is narrow and is now.

I strongly urge that negotiations be begun immediately with representatives of the sugar industry to accomplish this.

Sincerely yours,

J. Bennett Johnston United States Senator

Honorable Mike Espy Secretary, Department of Agriculture 14th Street and Independence Avenues, S.W. Washington, D.C. 20250

Dear Mr. Secretary:

We understand that you will soon travel to Mexico to discuss United States-Mexican agriculture issues related to the North American Free Trade Agreement. We urge you to place sugar at the top of your list of items to be discussed.

As co-chairmen of the Senate Sweetener Caucus, we ask you to convey to your Mexican Counterparts how critical the resolution of the sugar issue is to passage of the NAFTA. As you are aware, the NAFTA is in trouble. Votes in both the House and the Senate are currently insufficient to pass the agreement. Senate passage depends upon Sweetener Caucus votes, which are dependent upon a clarification in the NAFTA text of the definition of "sugar."

Our request is a fair one. In fact, it is our understanding that Mexican sugar producers have already agreed to it. We would like to be able to support and actively work toward passage of the NAFTA. However, until we receive concrete assurances that this sugar problem has been adequately resolved, we cannot do so. We believe it to be in the best interests of all NAFTA supporters for this issue to be resolved as soon as possible.

Thank you for conveying this message on our behalf.

Sincerely,

JOHN BREAUX United States Senator LARRY CRAIG United States Senator

OCTOBER, 1993

"THE LACANE TIGER 2 ROW HARVESTING SYSTEM" EXPERIENCE, TECHNOLOGY, AND GOOD COMMON SENSE



- * WOULD YOU LIKE TO SEND CLEANER CANE WITH LESS MUD TO THE MILL?
- * WOULD YOU LIKE TO SEND MORE TONS OF CANE TO THE MILL LEAVING LESS SCRAP IN YOUR FIEIDS?
- * WOULD YOU LIKE TO MAINTAIN YOUR WHOLE STALK HARVESTING FLEXIBILITY?
- ★ YES, WHAT THE INDUSTRY IS REALLY WANTING TO DO, CAN BE DONE WITHOUT RADICALLY INCREASING THE HARVEST-ING COST PER TON.



"SUGARCANE EQUIPMENT SPECIALIST" Louisiana Cane Manufacturing Co. P.O. BOX 71 • Thibodaux, LA 70302 • USA OFFICE: (504) 447-3771 FAX: (504) 447-8404 Would you purchase a La Cane Tiger Two Row Harvester and Loader if they would do a better job of cutting and loading your crop, make things easier for your operation, and put more profit in your pocket?

By taking a hard, close look at the industry's existing harvesters and loaders, we have gained more understanding about their good points and their bad points. This has given us the ability to design and develop, what we feel, is the finest, best performing, and most cost efficient 2 row harvester and loader on the market today.

BALANCED 4 WHEEL DRIVE PROPULSION

- Provides the advantage of maintaining constant forward velocity relative to pre-selected front end and carrier chain speeds.
- Reduces the changes of pulling stubble and breaking cane in wet field conditions.
- Keeps an untouched virgin row under the heap of cane, reducing the mud sent to the mill.
- With less sinking, the operator has less hastle, not having to re-adjust or raise the bottom blade out of the top of the row.
- Eliminating cones of mud dropped from the 3rd. tire of a conventional harvester, and not squaring off and pushing up mud on the sides of the row, makes it easier and better for the loader operator.

POSITIVE STACKING OF FIRST 2 ROWS

- Carries cane across the row before releasing it.
- Eliminates the chance of windrowing cane.
- Very little effort is needed to properly stack cane at rear of harvester, giving the operator more free time to do other things.
- Cane stacked straight across the row makes it easier and better for the loader operator.

SHORT FLY ROWS

- Center carrier opens right behind the front tires, providing a very short distance for the cane to travel.
- Help from a live bottom blade conveyor chain, which is timed with carrier speed, eliminates any dragging of cane.
- Bottom blade conveyor system reduces the chance of breaking cane over bottom blade, by not allowing the cane to be kicked around after it has been cut.
- Short distance spans of carrier and piling gates reduce the chances of losing cane, gaining more control for holding the cane until it is time to release it across the row.
- Near 0% scrap left in the field on fly rows.

MORE ADVANTAGES

- Front gathering system is set up to comb the row yet reduce the chance of breaking brittle cane.
- Excellent vision to the bottom blade and the top of the row gives you instant information on stubble and what adjustments should be made on front end gathering chains.
- Open vision to carrier chains make easier metering to ground speed.
- Clear vision of stacking on all (4) rows.
- Engine location and direction eliminates noise and heat blown at the cab and operator.
- Mega pulling power, with a well balanced hydraulic system, provides confidence in 4 wheel drive propulsion, the gatherer and carrier system, toppers and bottom blades.

UP FRONT WITH THE LEAGUE

adopted, the American Sugar Cane League and the other sugar producing groups will take an active opposing position. In adopting a resolution at the August Board meeting, the Board decided to approve a resolution and to be in a position of opposition, until such time as all wordings in the main agreement and/or side-bar agreements are reviewed to determine if our problems have been remedied.

The Bicentennial Committee chaired by Ramon Billeaud met this past month with Sides and Associates of Lafayette to review work in progress for the 1995 Bicentennial of the Louisiana sugar cane industry. The primary thrust of the committee meeting was to discuss potential projects, activities, and promotions during the 1995 Bicentennial year.

By the time you read this article, the League should have completed the comparison plantings with several different planters. The planting done in Cade on August 30 was attended by approximately 70 growers and interested parties from throughout the sugar belt. The Hearne planter, which is owned by the League, was to be moved about the sugar area. It is hoped that the planter

(Continued from page 4)

will culminate its planting season in the northern reaches of the sugarbelt. The comparison data is being compiled, but the ultimate comparison will be next year when the planted cane emerges.

Vernon Manufacturing (Broussard Harvesters) has begun construction of the proto-type harvester that will be tested this grinding season in the Jeanerette area. Walter Landry with Agronomics, Inc. advised the Board that construction has begun on the harvester, and that if all went well the machine would be completed and ready for field testing in the early part of October. Mr. Landry has tentatively indicated that he would hope to start harvesting with the new machine and transportation system on or about November 1, 1993.

The White House sent out a news release on the federal wetlands policy during the last week of August. Even though some of the points made by the White House is a step in the right direction, as regards agricultural wetlands, it is still felt that the Tauzin/Hayes legislation was the only real remedy for the wetland problems in Louisiana.



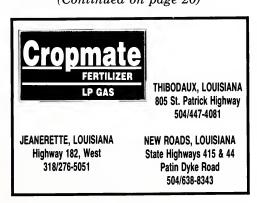
FARM NOTES (Continued from page 6)

MUD FREE CANE

Growers are continually bombarded with the idea that mud costs this industry money. This author has, in numerous articles, attempted to prove that fact. To further illustrate the effects that mud has on sugar recovery, your League Agronomists have prepared the following three charts.

Chart 1 (page 21) presents the average yield of sugar per ton of cane for the years 1983 through 1992 for the industry, as well as a prediction of the potential of what the industry could have produced if it had ground mud free cane. The potential yields are represented by the solid colored bars, while the actual yields are represented by the bars with the diagonal slashes. The potential yields of sugar per ton are calculated using outfield variety test data from most of the same varieties that are grown in the industry. These sugar per ton yields are calculated by taking the outfield results, putting the varieties in the same ratio that they occur in the industry, and dividing the yields according to the approximate ratio that the industry has for plant and stubble crops. Based on Chart 1, it can be seen that in all years the potential vields are higher than the actual industry yields. One reason is because the samples that are used in the outfield tests, although they are cut by machine, are collected by hand, and are not loaded with a mechanical piler. Besides being fresh cane, the samples are therefore free of mud. It can also be seen in Chart 1 that the difference between potential and actual yields is smaller in some years than in other years. This difference between potential yields and actual yields can be thought of as sugar that was produced, but never reached the warehouse, and will be used in the next chart.

Chart 2 (page 21) presents this difference between the potential sugar per ton yield and the actual industry yield of sugar per ton for 1983 through 1992, along with harvest time rainfall measurements. The difference has been calculated in terms of the percentage of loss from the potential yield, and is represented by the solid colored bars in the graph. The scale for these values can be read on the left of the graph and range from 15% sugar loss in 1987 to 30% sugar loss in 1986 and 1992. The inches of rainfall that fell during the months of October, November, and December are represented by the bars with the diagonal slashes, and the inches can be read on the scale on the right side of the graph. The range in rainfall starts with a low of 7.3 inches in 1988 to a high of approximately 18 inches in 1986 and 1992. By comparing the different amounts of rainfall in each year to the percentage of sugar loss, it is easy to see the strong relationship that rainfall has with the yield of sugar per ton that was available but never achieved. For example in the driest years of 1987, 1988, and 1989, the industry experienced the smallest percentage loss, which means that actual yields were closer to the potential. In the wettest years of 1986 and 1992, the industry experienced the greatest percentage loss (Continued on page 20)



FARM NOTES (Continued from page 19)

which means that yields were far from the potential. This strong relationship can be seen in the next chart.

Chart 3 (page 21) presents the same data as in the previous chart but now as the relationship between the percentage difference in sugar per ton and the inches of rain during the harvest months. Each dot on the graph represents one year, and simply shows that the more rain that is experienced during October, November, and December, the greater the loss in sugar. Statistically, the calculations show that each inch of rain results in a loss of over 1% of the potential sugar that was predicted. This amount of sugar, when calculated over the entire industry, equals a very large sum of money that could be available if rainfall did not have the effect of producing mud which is loaded with the cane.

Once again, data has been presented which shows the effect that rainfall (mud) has on our industry. It is clear that in most years we have great potential for high sugar recoveries, as seen in Chart 1. However, we do not have the equipment that can simulate dry weather harvest during the wet years. That should be the goal of this industry: To simulate dry weather harvesting even during wet years. This is why there is such great concern over the loading and harvesting equipment that is currently being used and why so much time, effort, and money is being spent to find a better way to achieve more of the potential sugar that is available to the industry.

The big question that growers normally ask at this point is: If I spend money to buy better equipment, and I do not deliver the mud and trash, my sugar per ton of cane (CRS) increases, but my tonnage could decrease — will I make more money with better equipment? This is not an easy question to answer because of the many different types of equipment that are available. However, during 1992, League agronomists conducted tests where different loaders were used, and not only was CRS measured, but also tonnage, sugar per acre, and sediment were measured. Results can be seen in the table below:

	Loader Type	
Yield	single row	two row
Tons cane/ac	28.1	29.2
Sugar/ton	206.0	214.0
Sugar/acre	5777.0	6235.0
Sediment	10.4	6.6

Although this is only one series of tests at one location, the tests consisted of over 250 tons of cane that were hauled to the factory. Statistical analysis of the data indicates that the 458 pounds of additional sugar delivered by the two-row, table piler loader was significantly different from a conventional one-row. mechanical piler loader. This one series of tests would indicate that growers could achieve higher profits from the better equipment that is currently available. This data, along with other information, would also indicate that the full potential of the cane is still not being achieved. The industry still needs better equipment to harvest and load during wet weather.

(Continued, SEE CHARTS, page 21)

FARM NOTES (Continued from page 20)

CHART 1

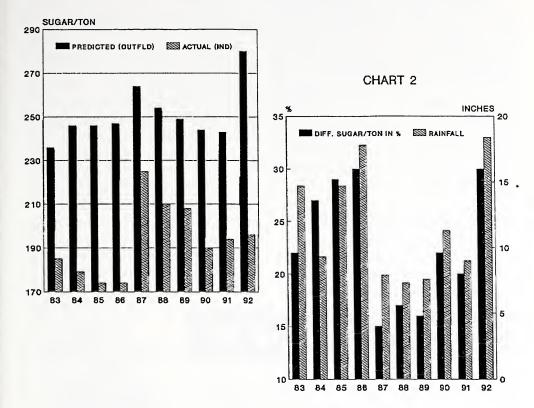
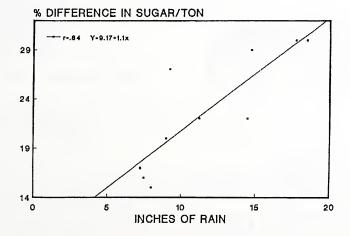


CHART 3



BATON ROUGE LINE (Continued from page 8)

conference committee reports during the final few days of a regular session.

Regular sessions in odd-numbered years may consider any and all legislation, except that which would levy a new tax, increase an existing tax or legislate with regard to tax exemptions, exclusions, deductions or credits for the state or any statewide special district. Regular sessions in even-numbered years will be restricted to the consideration of fiscal matters only and limited to thirty legislative days within a fortyfive day period.

CAPITAL OUTLAY BUDGETING

SENATE BILL 116 (McPherson) — Would require the debt service for capital improvements to be stated as a separate item and allocated to the appropriate budget unit in the budget estimate submitted by the governor.

LIMITATION OF STATE DEBT

SENATE BILL 1079 (Johnson) — Would require the Legislature to define by statute "net tax supported debt", and established a limit to the amount of such debt, which will reduce the service of same to six percent of revenues in the state general and dedicated funds by Fiscal Year 2003-04 and thereafter. The debt limit can only be changed by a twothirds vote of the Legislature on a specific legislative instrument and the instrument may apply to related projects or a single project. The Bond Commission cannot exceed the debt limit without such legislative authorization.



ENVIRONMENTAL PERSPECTIVE

(Continued from page 9)

Pollutant	Reportable Quantity in Pounds
Aldrin	1
Ammonia	100
Captan	10
Chlorine	10
Copper sulfate	10
Guthion	1
Heptachlor	1
Lead Subacetate	100
Parathion	1
2, 4-D	100
Characteristic of Corrosivity	100
Characteristic of Ignitibility	100
Characteristic of Reactivity	100

Whether or not a material released to the environment is on the reference list of chemicals, if the release might cause significant environment effects, such as fish mortality, odors or debris accumulation, the unpermitted release must be reported to the Department of Environmental Quality (LDEQ). Notification by telephone should be made within 24-hours of learning of the unauthorized release. If possible, notification should be made during business hours at the following telephone numbers.

THE SUGAR BULLETIN 448-3708

Division	Telephone No.
Air Quality Division	504/765-0219
Radiation Protection Division	504/765-0160
Solid Waste Division	504/765-0249
Hazardous Waste Division	504/765-0355
Underground Storage Tanks Division	504/765-0243
Ground Water Protection Division	504/765-0585
Water Pollution Control Division	504/765-0634

When the above listed telephone numbers are not available, LDEQ can be notified at 504342-1234.

Remember that one reason for updating the reporting rules is to foreclose any "ignorance of the law" excuses. It is better to report a questionable incident and suffer the consequences than to be blamed retrospectively for a significant pollution incident that was not reported. Sugar cane, cane sugar, and molasses are not on the list of chemicals in the regulation, but it only takes a few pounds spilled in a critical location to kill fish or create a safety hazard on a public highway.



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IN THE FACTORY

and this could make it difficult to assess the cause when the analytical results appear to be out of line. The analysis time is short, and the first routine applications of these techniques are expected to be for in-factory control, for example monitoring of molasses purities. At this stage it is very doubtful whether acceptable results could be obtained for raw sugar quality and cane payment.

There is potential for confusion over the term "near infra red - nir," since it is also used in another context. The new Domino contract for raw sugar polarization specifies the use of a polarimeter operating at a wavelength in the nir range. This is very different from the methods described in the previous paragraph. The similarity is in the wavelength of the light used in the instrument. The nir polarimeter is essentially a standard instrument, but operating at a higher wavelength.

Many mills seem to make too many analyses in that there is overproduction of data that has little practical use. More data would be useful if their collection was well planned and the assessment thought through carefully. For example, complete analysis of all massecuites and their molasses can be used for evaluation of boiling house operations. A 2,000 cu.ft. vacuum pan containing Amassecuite should yield about 100,000 lb. of sugar per strike, worth in excess of \$20,000, more than the cost of most new cars. Analysis of each strike for crystal yield is the best approach to maximizing the utilization and recovery of each pan.

The analysis performed must be justified in terms of the value of the information obtained. If the process operation does not change over a short time period, for example, the intermediate

brix values in the milling tandem, then only periodic analyses are required, unless there is a significant change in the most important parameter, the pol in final bagasse. Other factors can change significantly over a short time, for example the purity of final molasses and the quality of footing for the various strikes. In these cases more frequent analyses are justified.

(Continued from page 11)

Sampling errors are major problems, especially for the solid or semi-solid streams - bagasse and filter cake. It is essential that the bagasse sample be taken across the whole width of the carrier. There are cases where the imbibition before the last mill was only applied to the central part of the cane mat, and the bagasse sample taken from the center of the flow. Measurements of pol % bagasse for material from the sides of the flow showed them to be at least 50% higher than the routine samples. A problem with filter cake sampling is that filtrate often runs down into the conveyor taking the mud out. Samples taken from the drum at discharge do not contain this filtrate and are therefore lower in pol than the material leaving the factory.

An interesting note on the use of bagacillo was a recent abstract published in one of the sugar journals. Bagacillo is essential to good filter operation but, since it is fairly dry from the mill, it absorbs juice which then has to be washed out on the filter. The report described soaking the bagacillo in hot water before mixing it with the clarifier mud. They claimed that this approach reduced the pol in filter cake by more than one point. Another advantage to this treatment would be that, if the water was hot enough, there could be

(Continued on page 31)

CLASSIFIED

FOR SALE: 1-Barko 160 Transloader on trailer with large grab. Very Good Condition. Call W.S. Pearce at (318) 346-2756 after 7 p.m.

FOR SALE: 1-8 Row Spray Rig — \$500; 1-8 Row 386 Int'l Planter with Folding Bar — \$1,000; 1-1980 1460 Int'l Combine with 22 Int'l Header. Call (318) 845-4928 after 6:00 p.m.

FOR SALE: 1-J & L Harvester — 18,000 Hydrostatic; 1-300 amp. Lincoln Welder; 1 Broussard Loader on IH 856; 1-856 IH Hi-Clearance Tractor; 1-1530 JD Tractor; 1-1630 Cone Disc Harrow. Call (504) 265-3687 or (504) 265-3908.

FOR SALE: 1975 Thompson Harvester with JD Engine; Broussard Cane Loader on David Brown Tractor; Prentice Transloader with Allis Chalmers Engine; 3 Point hitch 5-row Sprayer with 200 gallon tank. Call Talbot Farms at (504) 526-4774.

FOR SALE: Oliver 3-row Cultivator. Call (504) 446-2524.

FOR SALE: IH 1066 High Crop, IH 806 High Crop, IH 1466 Low Clearance, David Brown 1200, White 2-60, 2-IH Hydro 100, Cameco Loader (SP 200) w/backhoe, single row — Broussard Harvester, 3208 Catapiller Engine, 2-480 IH Disc Harrow, 2-Mechanical Planters, Prentice Transloader (F700 Ford), Cane Trailer, Various Field Equipment. Call Joseph Boudreaux Farms, Inc. at (504) 447-7685.

FOR SALE: 8' Corrugated Copper Steel Culverts; 12' sections can be joined for longer lengths. Call Frank Martin Farms at (318) 836-5583 or (318) 836-5873.

FOR SALE: 2 new Goodyear 20.8 R38 R & C Tires \$750.00 each OR 2 used Goodyear 20.8 R38 R & C Tires 10 to 15% wear \$625.00 each. Call Talbot Farms at (504) 447-7221.

FOR SALE: Int'l 1066 Hi-Clearance; 1-Prentice Transloader; 2-4' x 20' Cane Planter Aides; 1-Taylor Fertilizer Spreader Cart; 1-"V" Ditcher. Call (318) 276- 4474.

FOR SALE: 1-8' x 20' Planters Aide — \$4,500; 1 JD Loader 4020 Powershift — \$6,500; 1-Husky Transloader mounted on Int'l (road worthy) — \$7,500; 1 Ramsey Transloader mounted on Trailer — \$3,500; 1-Lilliston Rolling Cultivator — \$500. Call (504) 638-7535 after 6:00 p.m.

FOR SALE: 1992 Single Row Broussard Cane Cutter. Sunstran Hydraulic JD Engine. Call (504) 694-3970.

FOR SALE: 5 Thompson Planters Aides 6' x 20' — \$1,500 each. Call Todd Andre at Alma Plantation (504) 627-5837 or (504) 627-6388 or call the main office at (504) 627-6666.

EFFECTS OF NAFTA

- a. Mexico is projected to be a net exporter of sugar during the current and/or coming marketing year. If Mexico is projected to be a net exporter during the current or coming year, the quota is raised to 25,000 MT maximum.
- b. In year seven, the duty free quota will increase to 150,000 MT maximum.
 - i. In years eight through fifteen, the previous year's quota is increased by ten percent.
- c. If Mexico is determined to be a net exporter for any two consecutive years during the fifteen year transition period, all surplus sugar is allowed, duty free, beginning in year seven (Markwart, 1991).

One must base the determination of "net exporter" status on some predetermined criteria. This determination is based on:

- 1. Domestic production exceeding aggregate consumption of domestically produced sugar.
- 2. Ending stocks, for the current marketing year not varying from beginning stocks, of the same period, by plus or minus ten percent.
- 3. Imports are zero²

These criteria seem reasonable, but careful scrutiny of the data on which Mexico's status is based is in order. Dr. Jose Pinto Mazal, Vice President of the National Sugar and Alcohol Industry Chamber of Mexico, acknowledges that Mexican imports of sugar this year (1992) across its borders with the United States and Guatemala are about double the officially reported amount (Roney, 1992 b).

Seldom is the case where a year-end actual is equal to projections for the same period. As this pertains to surplus Mexican sugar, the variance for a given marketing year will be reconciled by the following methodology.

> The net exportable current year sugar surplus shall be adjusted upward for an underestimated surplus in the previous marketing year, and same shall be adjusted downward for an overestimated amount based on the previous marketing year's net exportable surplus (Markwart, 1991).

The appropriate United States government agency will likely be charged with the responsibility of monitoring the imported sugar.

In addition to monitoring yearly variation of exportable Mexican sugar, another accounting process will undoubtedly be required for the unlimited duty free Mexican raw sugar, not covered by NAFTA, that will be allowed into the United States for refining provided it is re-exported to Mexico. True reconciliation of variances in this sugar is bound to be as illusive as that of the previously mentioned NAFTA sugar imports.

Mexico's Obligations

One may conclude that the United States is to accommodate the full burden (Continued on page 28)

² Minimal amounts of sugar imports are allowed for clearly identifiable transportation cost advantages (Markwart, 1991).

EFFECTS OF NAFTA (Continued from page 27)

of facilitating this provision of NAFTA. However, there are some obligations on Mexico's part. In consideration of the access to the United States market, for its surplus sugar, Mexico will:

- 1. Harmonize border protection with that of the United States on or before year seven of the implementation period of NAFTA.
- 2. Reduce its import tariff by fifteen percent over the first six years, and by straight-line in years seven through fifteen.
- 3. Provide duty free access for raw sugar imported by the United States from Mexico for refining and re-export to Mexico (this is the same sugar alluded to earlier) (Markwart, 1991).

Joint Obligations

Considering the significance involved for full implementation of NAFTA, regular meetings between the two countries are an item of relative importance. Annual meetings are planned for discussion as to whether Mexico will be considered a "net exporter" for the current or the upcoming marketing year. If the determination is made and Mexico is a "net exporter," both countries will calculate the estimated net exportable surplus according to the formula and adjustments for the applicable years. Additionally, sugar containing products will be granted duty free access in both countries (Markwart, 1991).

NAFTA's Agriculture Provision, as it pertains to Mexican sugar, is planned for implementation as set forth herein. The potential impact of this provision relative to Louisiana's sugar industry is a matter of great concern for many business and government leaders.

Impact of NAFTA on Louisiana's Sugar Industry

A free trade agreement such as NAFTA should serve to enhance markets and industries for all countries involved. For the United States, specifically Louisiana's sugar industry, NAFTA is anything but beneficial and could possibly be the means of its demise. As proposed, NAFTA gives Mexico unlimited access to the domestic sugar market in as little as six years (Roney, 1992 a).

The potential for excessive amounts of sugar on the market will force prices down to levels lower than those required for Louisiana's industry to sustain normal profits. To compound the problem, domestic production quotas may be implemented as a means of relieving sugar supply. These production quotas will be at the expense of Louisiana and other domestic producers, and will result in insufficient profits for Louisiana's industry. Due to restricted sugarcane production, planters, processors, and other service type businesses will be unable to generate adequate revenues required to offset the associated costs of conducting business, much less earning a profit. These measures will result in the "no cost" feature of existing sugar legislation becoming impractical.

United States Sugar Program

Part of the current sugar legislation in the United States provides domestic processors with an interim financing (loan) mechanism which serves as a catalyst for cash flow enhancement. The program provides an \$0.18/lb. loan, for sugar (Thibaut, 1992). The loans are repaid, with interest, when sugar is sold on the domestic market. An average

(Continued on page 29)

EFFECTS OF NAFTA

price on the domestic market is \$0.215/lb. Repayment of the loans is usually in less than one year. During its eight years of using this program, Louisiana's industry has managed to maintain a completely default-free record. In the event of default, the government would take possession of the sugar which serves as collateral.

This program also provides import quotas for forty countries including Mexico (Thibaut, 1992). These quotas discourage dumping of excess sugar on the United States market, and provide the means for sustained stable market prices. Louisiana's industry would be destroyed without the protection offered by this program.

Mexico's Intentions As discussed earlier. Mexico's beverage bottling plants, largely owned by sugar mill owners, are considering conversion to less expensive high fructose corn sweetener (HFCS) as the principal sweetener in soft drinks. Mexican government officials have, on occasion, stated they do not want access to United States' markets for the sugar displaced from transitions made in their country's beverage bottling facilities (Roney, 1992 b). this is in conflict with a statement made, on record, at a meeting in Dallas. TX in February, 1992, by Mexican Under Secretary of Agriculture, Dr. Luis Tellez (Roney, 1992 b). Considering that approximately 1.5 million tons of sugar is at stake, almost twice the amount Louisiana produced in 1992, there is cause for alarm not only by Louisiana's industry, but the entire United States industry.

In addition to the potential impact on domestic markets from Mexican sugar displaced by transition, to an alternative sweetener, there is growing

(Continued from page 28)

probability for overall increased Mexican sugar production (Roney, 1992 a). Mexican officials do not want limits imposed on access to the United States sugar market, and the proposed NAFTA accommodates their desire. They fail to recognize that Louisiana's, as well as other domestic sugar producers, are being victimized by a NAFTA that will impair their industry (Roney, 1992 b). Clearly, Mexican sugar producers stand to gain everything, while Louisiana's producers risk losing their industry.

There is not much time remaining before NAFTA is implemented. Legislation is being urged so as to alter the unfair advantages given to Mexican sugar under this Agreement. We now examine the specifics of the proposed legislation.

Overcoming Problems With NAFTA

Given Mexico's unlimited access to the United States sugar market, under the proposed NAFTA, proponents of the Louisiana industry and other sugar producing states recommend the following changes be made to equalize the overwhelming advantages afforded that country:

> 1. a) Include HFCS and other sweeteners in annual consumption calculations for Mexico, as aggregate consumption is a basis in establishing "net exporter" status.

b) Surplus producer status must be calculated on basis of varifiable history, and not just on uncertain projection as currently provided.

2. a) There must be an access limitation to the United States market for Mexican sugar.

(Continued on page 30)

EFFECTS OF NAFTA (Continued from page 29)

Currently under NAFTA, Mexico's access to the domestic market would be expanded to 150,000 tons in year seven, and increased ten percent per year during years eight through fifteen. At this rate. Mexican sugar imports would amount to 322,000 tons in year fifteen, forty-four times Mexico's current quota. The stipulation stating that if Mexico achieves surplus producer status for any two consecutive years, it is permitted to send its entire exportable sugar surplus to the United States must be stricken.

b) When domestic marketing allocations are imposed under the United States sugar program, imports from Mexico, or any other country above the 1.25 million short ton minimum, must be subject to the common external tariff. This is necessary in order to prevent substitution of sweeteners, during or after the transition period. Mexico must apply the common external tariff to all non-NAFTA sugar imports after it achieves net exporter status.

3. The section governing protection of sugar containing products and refined sugar from Mexico will be phased out over ten years. This transition period must be changed to fifteen years, which is consistent with the transition period for raw sugar (Roney, 1992 a).

Incorporation of these stipulations in the proposed NAFTA will establish "solid ground" on which the domestic sugar industry can stand and compete against any inefficient, subsidized, foreign industry.

During its long history, the Louisiana sugar industry has overcome many obstacles, some more severe than others. Considering the beneficial contribution this industry makes, to this state's economy, careful consideration must be given prior to implementing the proposed NAFTA.

Conclusion

Free trade is beneficial to all parties in a market oriented economy. The intent of NAFTA might be deemed to be in keeping with this belief. In order to firmly conclude that a trade agreement is helpful to all economies, credible quantifiable measurements must be made. If the relative benefits and detriments realized by each economy do not equate, then the results of a free trade pact are questionable. While being promoted as a means to reduce trade barriers, NAFTA, as proposed, is actually an end to a viable Louisiana industry.

While Louisiana's sugar industry is not the largest in this country, it is an integral part of the entire United States industry. Generally, when one component of this industry is threatened, the effect will follow for the others. The proposed NAFTA appears to be one sided in that it will cause nothing but disaster for Louisiana, as well as the entire domestic sugar industry.

NAFTA will eliminate the existence of a viable industry which is a net positive contributor to the Gross Domestic Product (GDP) of the United States. Destroying the Louisiana sugar industry will spell economic disaster for a large portion of this state. Job losses

(Continued on page 31)

EFFECTS OF NAFTA

occurring beyond the confines of the industry are expected to have detrimental long term effects. The Louisiana sugar industry is only one of many industries threatened by this proposed free trade agreement. Congress must consider these facts and vote against implementing NAFTA.

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IN THE FACTORY

(Continued from page 25)

sterilization of microorganisms in the bagacillo which are a significant factor in the deterioration of juice in the mud handling system.

Factory chemical is a subject that we will never cease to discuss, and we must be concerned enough to do the best job possible. As we begin the 1993 crop in Louisiana, I wish all the producers and processors the very best for the season. President, American Sugar Beet Growers Association, Washington, DC.

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Vol. 72 - No. 2

NOVEMBER, 1993

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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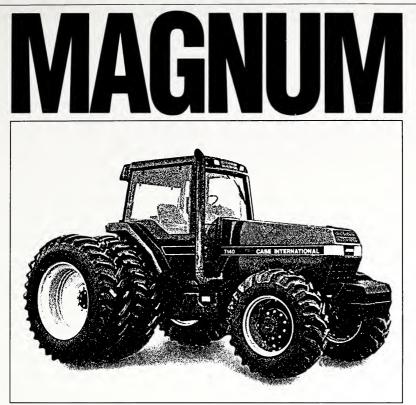
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This past month has been, as the first seven months, quite hectic. And let me say that I have enjoyed every minute of it. Some people may look at problems and worry themselves about finding solutions to those problems. Instead, I look at problems as a challenge to find a resolution and to move on to the next agenda or set of problems. We watched the President launch his pro-NAFTA campaign in New Orleans, and we at the League have continued to discuss with our legislative delegation their position of opposition to the NAFTA, unless the sugar language in this agreement is corrected.

The Louisiana Sugar Cane Festival and Fair Association held its 52nd annual festival in New Iberia, Louisiana on September 23-26, 1993. Peachy, Seph, Claire, and I enjoyed our first Sugar Cane Festival and Fair from a different viewpoint; that of the General Manager of the American Sugar Cane League. At the same time that we enjoved the events that surround this festive occasion. I immediately realized that the festival was not all play for me as it has been in years past. I found that, even during this festive time, there were still people within and outside of the sugar industry who had questions about the different elements that could impact our industry, i.e. . . . NAFTA, GATT, National Healthcare, Tariff Rate Section 22 Violations. Quotas. Marketing Allotments, Proportionate Shares, Research and Development of varieties and of farm equipment. Additionally, I immediately realized that my schedule and demands of my time and

energy were far less than that imposed on John and Karen Gay (King Sucrose and Queen "B" LII) who had to continually chase, coral, harness, and maybe even occasionally restrain four little "cotton-top" girls, while at the same time demonstrating to the masses that they were, in fact, the "royal couple" that they are!

The festival began on Thursday evening, King Sucrose LII, John Gay, and his wife, Karen, were honored at a cocktail party held in their honor. On Friday, the Louisiana Cooperative Extension Service and the American Sugar Cane League honored the state's high vield winners at a luncheon held in city park (A list of the 1992 high yield winners can be found beginning on page 12 of this issue.) Following the luncheon, the Board of Directors met for the monthly meeting at the Best Western Motel in New Iberia. The items on the agenda included updates on the harvester/transportation project. Washington update, and regular committee reports.

Chairman of the Board, Bert Beyt, briefed the members on the harvester/ transportation and the cane planter projects. Two-thirds of the manufacturing was complete, but the machine was not fully assembled. The harvester should be in the field by early November for a full testing. The cane planter demonstrations have been held and data from the test are being tabulated. The test results will be published as soon as it is compiled.

In the Washington update, it was

(Continued on page 31)

WASHINGTON UPDATE WITH DON WALLACE

USDA Candidates Stalled

USDA candidates for the positions in Under Secretary for International Affairs and Commodity Programs in Gene Moos's jurisdiction have been stalled. One candidate has the entire group held up at the White House. Moos's choice. for administrator of the Foreign Agricultural Service, is Joe O'Mara, a careerist who has little political background to get a White House blessing. No one knows how long Moos will hold out for the candidate he wants. The other candidates are ready to go. They are: James Schroeter, Deputy Under Secretary for International Affairs: Dallas Smith, Deputy Under Secretary for Commodity Programs: Grant Buntrock, Administrator of the Agricultural Stabilization and Conservation Service (ASCS); K. Rashid Nuri, Deputy Administrator for Management; and Parks Shackleford, Deputy Administrator for State and County Operations. Shackleford. a graduate of Tulane University, was the Staff Director of the House Agriculture Subcommittee on Cotton, Rice, and Sugar during Rep. Jerry Huckaby's chairmanship. The General Sales Manager in the Foreign Agricultural Service is designated to be FAS veteran Christopher Goldthwait. Lennett Wagner, a counsel at the Senate Agriculture Committee is a strong, but unconfirmed contender for the Administrator of the Office of International Cooperation and Development.

Marietta Yancey has been appointed Director of the Legislative Affairs staff in USDA's Foreign Agricultural Service. Yancey was the Legislative Assistant for Agriculture and Trade in Rep. Glenn English's office, D-OK, for 16 years.

Patricia A. Jensen was named, by

Secretary of Agriculture Mike Espy, as Deputy Assistant Secretary for Marketing and Inspection Services. Jensen, an attorney, had been executive director of Farmers Legal Action Group, a nonprofit law firm serving farmers, farm advocates, and farm organizations. She also has served as Minnesota's Deputy Commissioner of Agriculture and Director of Government Relations for the Pillsbury Company.

Rumored to be a candidate for USDA Deputy Assistant Secretary for Science and Education is agricultural economist Susan Offutt. She is presently serving at the National Research Council as the Board on Agriculture's Executive Director. She has also worked in the Office of Management and Budget as Chief of the Agriculture Branch, and in USDA's Economic Research Service. With the plan to move ERS under the Assistant Secretary for Science and Education, Luis Sequeira, a plant scientist from the University of Wisconsin nominated for the post, may need the advice of an economist.

Senate Agriculture Committee Hearings on USDA Reorganization

Secretary Mike Espy appeared before the Senate Agriculture Committee on October 6, 1993, to discuss the reorganization of USDA that has already begun. The reorganization process includes closing of more than 1,300 county offices, the elimination of 7,500 jobs, and the restructuring of the main office which will take place immediately. Secretary Espy responded to questions from committee members regarding the changes at headquarters. Changes at headquarters have not been made specific. However, the cut will

(Continued on page 32)

FARM NOTES By Dr. Charley Richard CANE PILER MODIFICATION - CROP REPORT - PLANTING COMPLETED THINK ABOUT VARIETAL COLD TOLERANCE

Mr. Lawrence Dugas of New Iberia has recently modified his mechanical piler in a way which I believe should be of interest to many growers. He currently has a two-row piler with footballs rather than chains. His modification comes in a piler arm which is mounted in the middle of the heap furrow and extends a foot or more past the front of the normal piler arms. It also is about 1.5 inches higher than the piler arms. This middle piler lifts the cane ever so slightly and allows the operator to raise the whole piler assembly so that the piling arms do not have to contact the sides of the row. This allows the unit to pick up cane without touching the row. Mr. Bryan Allain has built a similar unit, and both growers have mill results which indicate that their sediment readings have dropped with the use of this middle piling arm. Both growers have indicated that others are free to copy the idea and it takes less than \$50 worth of material to manufacture the piling arm. A picture of this piler can be seen on page 39.

CROP REPORT

The 1993 grinding season began when Evan Hall Sugar Cooperative started on September 30, 1993. By October 14, all of the 20 Louisiana raw sugar factories had begun the grinding campaign. The first reports of cane tonnage were perhaps a little higher than expected, but sugar quality numbers are below expectations. Earlier estimates of 800,000 to 850,000 tons of sugar for the 1993 season still seem reasonable at this point.

There are numerous reasons why the crop has begun with an erratic and lower than normal CRS. First of all, the crop is very immature as a result of the extreme growing conditions it has faced during 1993. The crop began after having been frozen back to the ground by the March 12-14 freeze in most areas of the belt. Then came the dry weather and shorter than normal cane that has plagued most of the belt throughout the year. With the short cane, many growers chose not to apply as much Polado as they normally would have. Their thinking was that the extra tonnage would be worth more than the increased sugar level. Test data from 1993 is needed to settle this issue that seems to be an arguing point between growers and mill personnel. Some growers who applied Polado feel that it did not work well this year while others feel that although it worked, the sugar content is still lower than normal. With the abundance of shorter cane, especially in the western and northern areas of the cane belt, more green leaves are being delivered as growers attempt to get all the tonnage they can. This has had a marked effect on CRS. Most factories are reporting at least an adequate quantity of juice. Low juice purity indicates an immature crop but still one with some promise. Most factories are making much more molasses per ton of cane than normal.

Most of the belt stayed dry through the middle of October. At the League Office in Thibodaux, only 0.17 inches of rain has fallen between September 24 and October 20. The passage of a cool front on October 21 brought between .5 and 4 inches of rain to most of the cane belt. Some cane, especially in the Raceland area, fell with the frontal passage. October is shaping up, true to form, as the driest month of the year in south Louisiana. The normal October rainfall for the cane belt is approximately 3.75 inches.

Only mild cool fronts have been

(Continued on page 39)

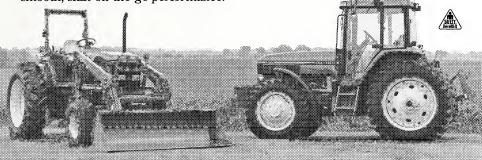
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THE BATON ROUGE LINE By Tom and Linda Spradley

ANTICIPATED TAXATION 1994

Although we are only seeing the first days of fall, and spring seems a long time in the future, it is not too early to begin looking at the anticipated issue that will appear in next year's legislative session. At press time the election for the constitutional amendments had not been held. However, for the purpose of this article, we will work under the assumption that amendment one, which mandates shorter, fiscal-only legislative sessions in alternate years, will pass. In other words, next year will be open season for taxes, and they are most likely to fall on the shoulders of business.

The Department of Revenue currently is studying the implementation of a "combined unitary tax." Basically, the combined unitary system means that any company, domiciled in Louisiana, would have the corporate income tax rates apply to all income derived by "related" subsidiaries — in state or out of state. While this tax might not directly impact members of the League, it certainly connotes a danger sign, loud and clear, as to the direction that might be taken at next year's fiscal session. Taken at its best, this tax could be used



as a trade off to fraction the business community and pass several different taxes.

Which leads us to SECURE, a committee comprised of members from the public and private sectors to "secure" the future of Louisiana. Among the matters being reviewed by this committee are three taxes that seem to keep cropping up: elimination of the phaseout of the inventory tax, an increase in the corporate income tax, and an increase in the severance tax.

At whatever methods of taxation the Department of Revenue or Division of Administration eventually arrive, we can be sure of two things: they will not be neutral, and they will be borne by business.

Add all of this "good news" to the seemingly no longer necessary twothirds vote of the Legislature to levy a tax, and business faces some serious challenges. As you might recall in the last session, the Attorney General opinioned that a two-thirds vote was not necessary when voting to allow another agency (in this case, the Louisiana Recovery District) to suspend certain exemptions on the one percent sales tax levied by the district. Our fear is that in the future this will be expanded to other taxes, allowing a simple majority of the Legislature to, in essence, pass a tax.

A final note. We understand that as of November 1 the Department of Revenue will begin charging 30 dollars per hour plus expenses for performing an audit — in addition to any tax liability.

Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

SOLID WASTE MANAGEMENT

Recent editions of the bulletin have discussed the impact of the 1993 revision of the Solid Waste Regulations promulgated by the Louisiana Department of Environmental Quality (LDEQ). According to these new rules, solid waste from agricultural operations, such as sugar mills, are to be handled according to a "Best Management Practice Plan" for each mill; that plan must be approved in writing by the Department of Agriculture and Forestry. I believe that industry, LDEQ and DAF agree on the concept, but it is difficult to get the system defined in written guidelines that all three interests understand.

Part of the communications problem is varied perspectives and word definitions. Environmental agents tend to look at everything that is not packaged and sold as "waste," even though the LDEQ Regulations say specifically that a material is solid waste only if it is "discarded" or thrown away as useless. An uninformed environmental agent might look at bagasse and filter mud as solid waste (and these commodities could be solid waste if discarded), but an informed mill manager looks at these commodities as "by-products". Bagasse burned in mill boilers is by-product utilization and not waste or "refuse derived fuel". Filter mud used to construct new cane fields or to rebuild fallow cane fields is "by-product utilization" and not "waste" disposal.

League representatives are recommending that the Best Management Practice Plan for each mill should be one that provides for elimination of wastage from sugar cane processing operations. This objective should be accomplished by:

- 1. Optimum capture and use of all harvested cane stalks.
- 2. By-Product Utilization.
- 3. Recycling of all otherwise unused processing residues back to the soil to sustain and improve production.

Obviously, it is much easier to state concepts in these general terms than to spell them out in detail as needed by Federal and State Regulating Agencies. However, progress is being made, and more specific information will be available soon.

Representatives of the Department of Agriculture have indicated that mills will be expected to have Best Management Practice Plans approved before the 1994 grinding season, and that these plans be implemented for the 1995 grinding season.



IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

CLARIFICATION

As I visit the mills, I usually take a look at the quality of the clarified juice. Most of the time the clarification is quite good, but it is important to make a distinction between the presence of floating particles of bagacillo or muddy juice, and the background haziness of the "clear" juice. Floating fine bagacillo is often a consequence of inadequate heating and flashing, or too rapid flow of juice in a section of the clarifier. Muddy juice is usually due to poor flow control and possibly inadequate flocculant use. The large muddy flocs and bagacillo are relatively easy to remedy by better control of the heaters, flocculant addition, and even flow in the clarifier. Turbulant flow in the clarifier. caused perhaps by poorly designed piping inside the clarifier, can be moderated to achieve better operation. Of course, the presence of mud and bagacillo has an adverse effect on the quality of the raw sugar, and this can only be avoided completely by installation of a syrup clarification and filtration system. Screening of the juice, with a fine woven stainless steel screen, is valuable for removal of bagacillo and other similar sized particles; but, this will not remove fine mud solids. Most of the time simple clarification is adequate for production of raw sugar acceptable to the refiners.

What I am more concerned with is the background haziness of the clarified juice — that cloudiness which is not removed by filtration through regular paper filters. This is caused by very small colloidal particles which have not been removed by the conventional liming, heating, and settling. No clarified juice is completely free of turbidity. This can be seen by comparison of the clarified juice with that obtained by the analytical clarification using the ABC reagent. We have measured this turbidity at a number of mills operating under differing circumstances. We have found that the turbidity values vary quite widely between the mills, between clarifiers, and between each tray on a single clarifier over time. Part of our ongoing research program is the investigation of the nature of this turbidity, its impact on the degree and type of scale formed in the evaporators, and its impact on raw sugar quality. The impact of very fine colloidal material on refinery operations is well recognized, but the chemical identification of the problem materials presents considerable difficulties. We know that we can obtain brilliantly clear juice by ultrafiltration but, as yet, this is not possible on the scale of operations in the raw sugar mills. One of the problems in this type of work is the inadequacy of established methods for turbidity measurement. Development of reliable methods for doing this is an essential part of the program.

Several practical questions have arisen concerning factory clarification. One mill, that had poor clarification and lacked raw sugar quality for a short time, was concerned as to whether the

(Continued on page 38)

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STATE'S TOP SUGARCANE GROWERS RECOGNIZED

The state's top sugarcane growers were honored on September 24, 1993 at the Annual Sugarcane High Yield Awards luncheon held in New Iberia in conjunction with the annual Louisiana Sugar Cane Fair and Festival.

Growers on 36 farms in 16 parishes were recognized for their production in the 1992 season in one or more of three categories — top 20 in the state, top parish producer, and top district producer.

This annual event is co-sponsored by the Louisiana Cooperative Extension Service and the American Sugar Cane League.

To qualify for these awards growers had to produce a sugar per acre yield at least 10 percent above the 1992 state average. Yields were figured using total acres of sugarcane grown on the farm.

1993 LOUISIANA HIGH SUGAR PRODUCER AWARDS (1992 CROP)

Rank/Name		Parish	Cane Acres	Sugar/Acre
1	Keith Zeringue	Lafourche	139.0	7,635
2	Henry Corley	Rapides	227.8	7,414.68
3	M. Rodrigue & Son	St. James	682.0	7,194
4	Newton Cane Co.	Avoyelles	1,040	7,054
5	Sugar Haven Farm	Iberville	537.3	6,809
6	Bain Farms	Avoyelles	1,815	6,776
7	David Brunson	Avoyelles	320	6,726
8	Acosta Brothers	Lafourche	609.6	6,654
9	3-D Sugar Farms, Inc.	Lafayette	783.9	6,559
10	Laurel Valley Plantation	Lafourche	769.5	6,529
11	Ralph & Charles Zeringue	Lafourche	243.5	6,495
12	Matherne Brothers	Lafourche	629.2	6,447
13 T	Lloyd Newton	Avoyelles	400	6,412
13 T	Michael Dornier	St. James	279.6	6,412
15	B & A Cane, Inc.	Rapides	777	6,354.71
16	Waguespack Farms	St. James	1,408.1	6,348
17	Jimmy & John Earles	Avoyelles	392	6,330
18	D & W Porta	St. James	893.5	6,326
19	Denis Knobloch, Jr.	Lafourche	151.3	6,253
20	Rickey Rivet	Pointe Coupee	556.6	6,207.01

(Chart continued on page 13)

THE AMERICAN SUGAR CANE LEAGUE CONGRATULATES Louisiana's Top Sugarcane Growers in 1992

TOP SUGARCANE GROWERS (Continued from page 12)

Parish	Name	Sugarcane Acres Grown	Sugar/Acre
Ascension	J & R Robert	631.8	6,015
Assumption	Simon Landry	89.6	6,018
Avoyelles	Newton Cane Co.	1,040	7,054
Iberia	Burt Oubre	196.8	5,761
Iberville	Sugar Haven Farms	537.3	6,809
Lafayette	3D-Sugar Farms Inc.	783.9	6,559
Lafourche	Keith Zeringue	139.0	7,635
Pointe Coupee	Rickey Rivet	556.6	6,207.01
Rapides	Henry Corley	227.8	7,414.68
St. James	M. Rodrigue & Son	682.0	7,194
St. John the Baptist	Goldmine Plantation	591.4	6,021
St. Landry	Palmetto Cane Inc.	730	5,783
St. Martin	Daniel & Eric Dupont	93.6	5,619
Terrebonne	Johnny McCollum	93.3	5,484
Vermilion	Samuel C. Duplantis, Sr.	950	5,960
West Baton Rouge	Audubon Properties	1,680.6	5,347

Parish Winners

District Acreage Category Winners

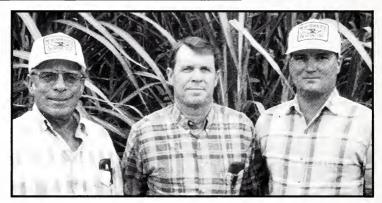
Acreage Category	Name	Parish	Acres Grown	Sugar/Acre			
Northern District							
0-199.9 200-699.9 700-1499.9 1500 + acres	Honey & Ronald Fuselier Henry Corley Newton Cane Co. Bain Farms	Pointe Coupee Rapides Avoyelles Avoyelles	100.8 227.8 1,040 1,815	5,027.79 7,414.68 7,054 6,776			
Non-Quota	Roger Brown	Avoyelles	25	8,568			
Teche District							
0-199.9 200-699.9 700-1499.9 1500 + acres Non-Quota	Burt Oubre Ricky Judice 3D-Sugar Farm's Inc. Triple V Farms Inc. Samuel Clay Duplantis, Jr.	Iberia Iberia Lafayette Lafayette Vermilion	196.8 657 783.9 1,517 30.9	5,761 5,580 6,559 5,685 7,158 2			
Non-Quota	Samuel Clay Duplamis, Jr.	vermiion	30.9	7,158.2			
River-Bayou Lafourche District							
0-199.9 200-699.9 700-1499.9 1500 + acres	Keith Zeringue M. Rodrigue & Sons Laurel Valley Plantation St. Louis Pltg. Co.	Lafourche St. James Lafourche Iberville	139.0 682.0 769.5 2,892.5	7,635 7,194 6,529 5,820			
Non-Quota	Wade J. Borne, Inc.	St. James	55.1	7,430			
	(SF	EE HIGH YIELD AV	VARD PHO	TOS on nage 14)			

(SEE HIGH YIELD AWARD PHOTOS on page 14)

1993 HIGH YIELD AWARD PHOTOS



KEITH ZERINGUE (right) Top 20 Producers 1st Place Top Parish Producer Lafourche District Acreage Category Winner Lafourche Agent Mike Hebert (left)



HAROLD (left) and JERRY RODRIGUE (right) – M. RODRIGUE & SON Top 20 Producers – 3rd Place; Top Parish Producer – St. James District Acreage Category Winner; Jimmy Garrett – St. James Agent (center)



HENRY CORLEY (2nd from left), CHARLIE WILSON, CHARLES COLLINS, EDWARD BEAVER, and ALBERT CORLEY, JR. – HENRY CORLEY FARMS – Top 20 Producers – 2nd Place; Top Parish Producer – Rapides; District Acreage Category Winner; Matt Martin, Jr. – Rapides Parish County Agent (far left) (Photos continued on page 15)

(Photos continued on page 15)

BLAKE (center) and DURWOOD NEWTON (right) NEWTON CANE CO. Top 20 Producers – 4th Place Top Parish Producer – Avoyelles District Acreage Category Winner Carlos Smith – Avoyelles Agent (left)





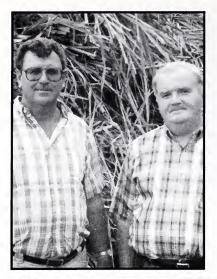
BRENT BARBIER (right) SUGAR HAVEN FARMS Top 20 Producers — 5h Place Top Parish Producer — Iberville Mark Tassin — Iberville Agent (left)



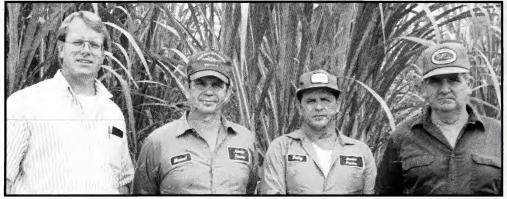
JOHN, BILL, EDGAR, and ROGER BAIN, BRUCE WEBB and BUSTER BAIN BAIN FARMS

Top 20 Producers – 6th Place District Acreage Category Winner Carlos Smith – Avoyelles Agent (left)

(Photos continued on page 16)



DAVID BRUNSON (left) Top 20 Producers 7th Place Carlos Smith — Avoyelles Agent (right)



MANUEL, BOBBY and P.J. ACOSTA – ACOSTA BROTHERS Top 20 Producers – 8th Place; Mike Hebert – Lafourche Agent (far left)



FRANCIS VINCENT, DALE, RICHARD and AARON DUHON 3-D SUGAR FARMS, INC.

Top 20 Producers – 9th Place; Top Parish Producer – Lafayette District Acreage Category Winner; James Devillier – Lafayette Agent (far left) (Photos continued on page 17)

JERRY McKEE, HOUSTON GERVAIS and MICHAEL HEBERT LAUREL VALLEY PLANTATION Top 20 Producers – 10th Place District Acreage Category Winner





RALPH (center) and CHARLES ZERINGUE (right) Top 20 Producers - 11th Place Mike Hebert -Lafourche Agent (far left)



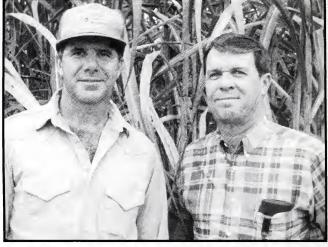
FRANCIS, CLARENCE JR., KIRLIN and JAKE MATHERNE MATHERNE BROTHERS

Top 20 Producers – 12th Place; Mike Hebert – Lafourche Agent (far left) (Photos continued on page 18)



LLOYD NEWTON (right) Top 20 Producers – 13th Place (Tie) Carlos Smith – Avoyelles Agent (left)

MICHAEL DORNIER (left) Top 20 Producers – 13th Place (Tie) Jimmy Garrett – St. James Agent (right)





HARVEY ALLUMS (2nd from left), KEMPER BUBENZER and GRADY BUBENZER B & A CANE, INC.

Top 20 Producers - 15th Place; Matt Martin, Jr. - Rapides Agent (far left)

(Photos continued on page 19)

PHOTOS NOT AVAILABLE — TOP 20 PRODUCERS

JIMMY & JOHN EARLES (photo not available) Top 20 Producers — 17th Place

D & W PORTA (photo not available) Top 20 Producers — 18th Place

RICKEY RIVET (photo not available) Top Parish Producer — Pointe Coupee

(Photos continued on page 22)



"THE LACANE TIGER 2 ROW HARVESTING SYSTEM" EXPERIENCE, TECHNOLOGY, AND GOOD COMMON SENSE



- * WOULD YOU LIKE TO SEND CLEANER CANE WITH LESS MUD TO THE MILL?
- * WOULD YOU LIKE TO SEND MORE TONS OF CANE TO THE MILL LEAVING LESS SCRAP IN YOUR FIEIDS?
- * WOULD YOU LIKE TO MAINTAIN YOUR WHOLE STALK HARVESTING FLEXIBILITY?
- ★ YES, WHAT THE INDUSTRY IS REALLY WANTING TO DO, CAN BE DONE WITHOUT RADICALLY INCREASING THE HARVEST-ING COST PER TON.



"SUGARCANE EQUIPMENT SPECIALIST" Louisiana Cane Manufacturing Co. P.O. BOX 71 • Thibodaux, LA 70302 • USA OFFICE: (504) 447-3771 FAX: (504) 447-8404 Would you purchase a La Cane Tiger Two Row Harvester and Loader if they would do a better job of cutting and loading your crop, make things easier for your operation, and put more profit in your pocket?

By taking a hard, close look at the Industry's existing harvesters and loaders, we have gained more understanding about their good points and their bad points. This has given us the ability to design and develop, what we feel, is the finest, best performing, and most cost efficient 2 row harvester and loader on the market today.

BALANCED 4 WHEEL DRIVE PROPULSION

- Provides the advantage of maintaining constant forward velocity relative to pre-selected front end and carrier chain speeds.
- Reduces the changes of pulling stubble and breaking cane in wet field conditions.
- Keeps an untouched virgin row under the heap of cane, reducing the mud sent to the mill.
- With less sinking, the operator has less hastle, not having to re-adjust or raise the bottom blade out of the top of the row.
- Eliminating cones of mud dropped from the 3rd. tire of a conventional harvester, and not squaring off and pushing up mud on the sides of the row, makes it easier and better for the loader operator.

POSITIVE STACKING OF FIRST 2 ROWS

- Carries cane across the row before releasing it.
- Eliminates the chance of windrowing cane.
- Very little effort is needed to properly stack cane at rear of harvester, giving the operator more free time to do other things.
- Cane stacked straight across the row makes it easier and better for the loader operator.

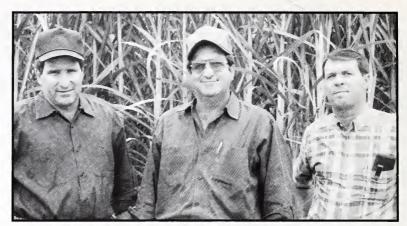
SHORT FLY ROWS

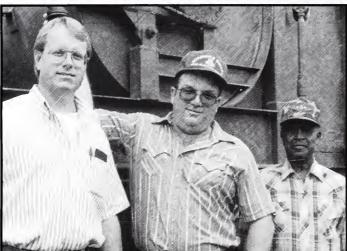
- Center carrier opens right behind the front tires, providing a very short distance for the cane to travel.
- Help from a live bottom blade conveyor chain, which is timed with carrier speed, eliminates any dragging of cane.
- Bottom blade conveyor system reduces the chance of breaking cane over bottom blade, by not allowing the cane to be kicked around after it has been cut.
- Short distance spans of carrier and piling gates reduce the chances of losing cane, gaining more control for holding the cane until it is time to release it across the row.
- Near 0% scrap left in the field on fly rows.

MORE ADVANTAGES

- Front gathering system is set up to comb the row yet reduce the chance of breaking brittle cane.
- Excellent vision to the bottom blade and the top of the row gives you instant information on stubble and what adjustments should be made on front end gathering chains.
- Open vision to carrier chains make easier metering to ground speed.
- Clear vision of stacking on all (4) rows.
- Engine location and direction eliminates noise and heat blown at the cab and operator.
- Mega pulling power, with a well balanced hydraulic system, provides confidence in 4 wheel drive propulsion, the gatherer and carrier system, toppers and bottom blades.

CARL and CHARLES WAGUESPACK WAGUESPACK FARMS Top 20 Producers – 16th Place Jimmy Garrett – St. James Agent (right)





DENIS KNOBLOCH, JR. (center) and WARNER TRIGGS, JR. (right) DENIS KNOBLOCH, JR. Top 20 Producers –

19th Place Mike Hebert – Lafourche Agent (left)



HERB SCOTT, CHRIS and JOHN ROBERT – J & R ROBERT Top Parish Producer – Ascension; Don Kirst – Consultant (2nd from right) Bill Davis – Ascension Agent (far right) (Photos continued on page 23)



SIMON LANDRY (left) Top Parish Producer Assumption Rick Louque – Assumption Agent (right)

BURT OUBRE (left) Top Parish Producer — Iberia District Acreage Category Winner Norris Grabert, Jr. — Iberia Agent (right)



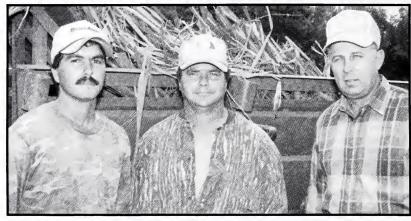


DAVID and STAN RODRIGUE GOLDMINE PLANTATION Top Parish Producer – St. John the Baptist Larry Brock – St. Charles Agent

(Photos continued on page 24)

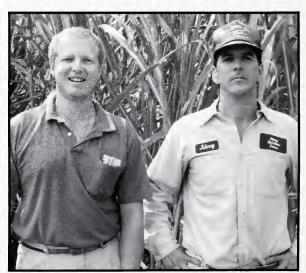
BERCHMAN LAVERGNE, (center) GARY LAVERNE, and his son JAKE PALMETTO CANE, INC. Top Parish Producer – St. Landry Keith Normand – St. Landry Agent





DANIEL & ERIC DUPONT Top Parish Producer – St. Martin James Devillier – St. Martin Agent (far right)

JOHNNY McCOLLUMN (right) Top Parish Producer – Terrebonne Barton Joffrion – Terrebonne Agent



(Continued on page 25)



SAM , SR. and SAM DUPLANTIS, JR. SAMUEL C. DUPLANTIS Top Parish Producer – Vermilion



JIM FONTANA, JOE PAUL JR., JIM GAUBERT, ERNEST MATTHEWS, and ROGER KAHAO AUDUBON PROPERTIES Top Parish Producer – West Baton Rouge Harry Laws – West Baton Rouge Agent (far left)

HORACE "HONEY" and RONALD FUSELIER District Acreage Category Winner



(Photos continued on page 26)

ROGER BROWN (right) District Acreage Category Winner Carlos Smith – Avoyelles Agent (left)

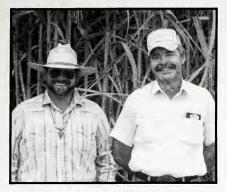




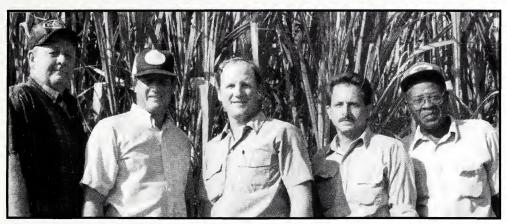
RICKY JUDICE (left) District Acreage Category Winner Norris Grabert, Jr. — Iberia Parish Agent (right)



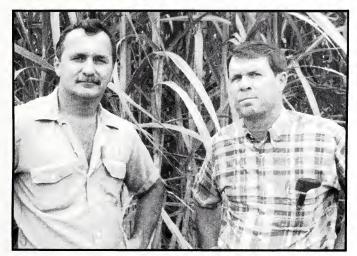
DANIEL VIATOR (right) – TRIPLE V FARMS, INC. District Acreage Category Winner; James Devillier – Lafayette Agent (left) (Photos continued on page 27)



SAMUEL DUPLANTIS, JR. (left) District Acreage Category Winner Howard Cormier — Vermilion Agent (right)



DICKIE LEONARDS, PRICE GAY, JOHN GAY, JOHN SALVADRAS, and J. B. JOSEPH ST LOUIS PLANTING CO. District Acreage Category Winner



WADE J. BORNE (left) District Acreage Category Winner Jimmy Garrett — St. James Agent (right)

COMPLETE & INDEPENDENT CROP CONSULTING SERVICES • Soil Testing • Weed Control • Insect Scouting • RSD Testing • Variety Selection • Value/Loss Estimates • Other Services • Year-Around Complete Consulting Package (services tailored to fit your needs) LONG PEST MANAGEMENT, INC. 720 Hwy. 308, P.O. Box 1193, Thibodaux, LA 70302 Office/Home Phone & Fax (504) 446-3520 Mobile Phone (504) 449-6170				
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THE SUGAR BULLETIN P.O. DRAWER 938 THIBODAUX, LA. 70302 For changes in present subscription, address imprint from front cover must be attached.	READ and ADVERTISE in THE SUGAR BULLETIN			

Louisiana Scientists Honored At Inter-American Sugar Cane Seminar

Entomologists Dr. Sess Hensley and Dr. Henry Long were honored September 17, 1993 in Miami, Florida before approximately 500 sugar scientists and technologists from around the world. They were attending the 1993 Inter-American Sugar Cane Seminar on "Sugar Cane and Our Environment." The two honorees



DR. SESS HENSLEY



DR. HENRY LONG

were each given a plaque of recognition "In appreciation of his outstanding work in pioneering, developing, and practicing the environmentally sound practice of Integrated Pest Management."

In introducing the honorees to the assembly, Dr. Freddie Martin, Professor and Head of the Sugar Station/Audubon Sugar Institute of the LSU Agriculture Center, observed that Integrated Pest Management was initiated in Louisiana in 1964, after over-dependency on a single insecticide had led to severe pesticiderelated ecosystem disruptions. This included insecticide resistance in the pest population, toxic pesticide residues, and destruction of beneficial non-target organisms including birds, mammals, fish, and arthropod predators.

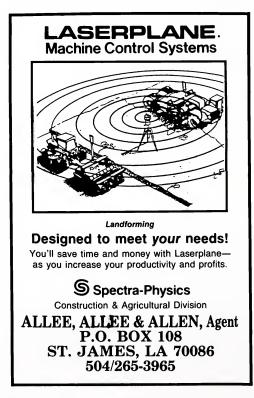
Martin stated that through their work, the implementation of Integrated Pest Management included: (1) the establishment of economic thresholds and appropriate insect population monitoring techniques, (2) emphasis on the use of insecticides which were less destructive to valuable non-target organisms, (3) emphasis on the use of insect-resistant varieties of sugarcane and selected cultural practices, and (4) the conservation of arthropod predators.

(Continued on page 36)

LSU Agriculture Center to Host Conference on Emerging Environmental Challenges

The LSU Agricultural Center, in conjunction with the Louisiana Department of Agriculture and Forestry, Louisiana Department of Environmental Quality, Louisiana Department of Natural Resources, Louisiana Farm Bureau Federation and the U.S. Department of Agriculture Soil Conservation Service, will host an environmental conference focusing on emerging environmental challenges. The conference will be November 16-17 at the Baton Rouge Hilton Hotel in Baton Rouge.

Emerging Environmental Challenges '93 will focus on BMPs, permitting, stormwater, wetlands, the coastal zone act, pollution prevention, solid waste, nonpoint source pollution, land



application, and liability. The numerous agencies involved in this conference and the theme for the conference, "Working Together for a Better Environment," signifies a growing awareness among agencies that they must work together to meet future environmental challenges.

"Environmental programs are very dynamic. New federal and state challenges are constantly emerging, and the public becomes confused as to which agency regulates specific environmental issues. Landowner and individual liabilities relative to compliance with environmental programs will also be discussed at the conference. Speakers from national, regional and state programs have been selected to present the most current information. Participants of this conference will have a clearer understanding of their responsibilities in making the environment better," says Environmental Education Specialist Dr. Bill Cochran.

The conference is directed toward landowners, municipal and parish officials, police jurors, consultants, small businesses, agricultural processors and concerned citizens. For more information on the conference program and registration, contact:

> Dr. Bill Cochran LSU Agricultural Center Louisiana Cooperative Extension Service, Knapp Hall P.O. Box 25100 Baton Rouge, LA 70894-25100

Phone (504) 388-5920 Fax (504) 388-2478

UP FRONT WITH THE LEAGUE

reported that the marketing allocations for the fourth quarter were changed, due to reassignments of the Hawaiian deficit. Don Wallace covers that in his article, Washington Update. It was believed that on October 1, the USDA *would not* impose marketing allotments. This belief became evident on September 30th. On October 1, the USDA *did not impose* marketing allotments, but allotments could still be implemented for subsequent quarters of this fiscal year.

A resolution was adopted by the Board declaring that the League is still in the *position of opposition to NAFTA*, in its present form.

The Board meeting adjourned and the festival weekend resumed. On Friday evening, another function was held to pay homage to the festival honorees, Pete and Jane deGravelles. On Saturday evening, the Coronation of Queen Sugar LII took place at the festival building on the grounds of city park. Miss Dina Fae Domangue, of Terrebonne Parish, was crowned queen. The first runner-up was Miss Kara Krista Garzotto, of Iberia Parish. Miss Maria Gonsoulin, of Lafourche Parish, was

(Continued from page 4)

second runner-up. Congratulations to all of the young ladies who participated in the contest, and best of luck to Dina in her reign as Queen Sugar LII.

Last week I had the privilege to give Larry Walker of USDA a tour through the sugar belt. Larry is a career Department of Agriculture employee and over sees seven commodity(s) program, one of which is sugar. Since sugar was new to him, we felt it to be imperative that he understand sugar cane and Louisiana's unique situation, problems, and conditions. After two long days, much good south Louisiana food, a memorable airplane trip, Larry was returned to New Orleans for his trip to Washington. I know that this immersion in Louisiana gave him a much better understanding of sugar cane, it's growers, and processors.

Well, so much for the fun parts of the job as General Manager, it's back to the office and NAFTA, GATT, Marketing Allocations, etc. . . . Never a dull moment!

SEE SUGAR CANE PLANTER SALE PAGE 40

WANTED: JD & I-H Tractors for Parts. Any Age or Condition. New, Used and Rebuilt Hi Crop and Row Crop Tractor Parts, Tires, Rebuilt Clutches, Crank Shafts, Injector Pumps and More. Also Any Hard-To-Find Parts. We Buy Farm Equipment & Salvage Tractors. Toll Free 1-800-259-3453 (318) 276-3453 (318) 276-3453 (318) 276-6230

WASHINGTON UPDATE

include plans to reduce 14 sub-cabinet positions to six and to eliminate 800 jobs. The number of agencies within USDA would be reduced from 43 to 30, saving \$2.3 billion over five years. Later this month, Secretary Espy will begin briefing the members of the committee on the closing of field offices in their respective states.

House Agriculture Committee Chairman Kika de la Garza (D-TX) introduced the administration's legislative proposal the week of September 27. Senate Agriculture Committee Chairman Patrick Leahy (D-VT) is expected to introduce the bill on the Senate side in the near future.

GATT UPDATE

It appears that an agricultural agreement in the Uruguay Round is

(Continued from page 5)

much closer to realization than one might think. However, some other areas like steel, electronics, maritime, etc., might cause the Uruguay Round to fail. If an agreement is reached by December 15, this would enable the President to notify the Congress that he "intends to enter into an agreement." Negotiators plan to return to Geneva by the end of October and work towards an agreement until the December 15 deadline.

NAFTA UPDATE

House of Representatives Speaker Tom Foley expects the House to vote on the North American Free Trade Agreement on November 17, 1993. President Clinton, on October 1, 1993, met with Mr. Foley and other House members to make arguments for NAFTA, to answer

(Continued on page 33)



WASHINGTON UPDATE

questions, and to listen to the comments of the House members. Clinton and Foley continued to assert that the tide is turning in Congress in favor of the NAFTA. Foley said NAFTA would be approved today if a secret ballot were taken. He believes that House lawmakers would vote overwhelmingly in favor of the trade agreement. Foley stated that there is a difference between lawmakers' private opinions and public pronouncement because of the intense opposition to NAFTA from organized labor and others. A final House vote will be close, Foley predicted, recognizing the uphill battle the White House and NAFTA supporters are waging to overcome opposition in Congress. The Administration expects to send NAFTA legislation to Capitol Hill by November 1, 1993. In the interim, congressional committees with jurisdiction over the trade pact have crafted implementing legislation with the assistance of the Administration. The President will have the final say over what is contained in the implementing bill he submits for formal introduction.

USDA Revises and Reassigns Sugar Marketing Allocations for Fiscal Year 1993

On September 17, 1993, the Commodity Credit Corporation (CCC) announced revision and reassignment of sugar marketing allocations for domestic sugar processors. These actions apply to all sugar marketed from October 1, 1992, through September 30, 1993, in the United States. Allocations were revised and reassigned July 26, 1993.

Several beet and cane processors provided CCC with corrected production data after the July 26 sugar marketing allocation announcement. Therefore, CCC increased allocations of all beet

(Continued from page 32)

and cane processors. These allocations would have been larger had the correct data been used to determine the sugar marketing allocations on July 26. The beet sugar allotment was increased by 12.2 thousand short tons (TST). The cane sugar allotment was increased by 1.0 TST.

CCC also announced a reasssignment of 85 TST of sugar marketing allotments from Hawaii, Louisiana, Puerto Rico, and Florida. Since some sugar processors do not have sufficient sugar to fill their allocation, the reassignment is the portion of the state allotments from Hawaii, (52 TST), Louisiana (28 TST), and Puerto Rico (5 TST) which will not be used.

CCC states that carryover levels in Hawaii, Louisiana, and Puerto Rico are quite small. They believe that the relatively high sugar prices may well result in a processor changing its normal inventory management policy and drawing down its normal carryover stocks. Due to the small amount of carryover and the end of the fiscal year, the amounts the processor will reduce its normal carryover cannot be determined precisely. Thus, the reassignments are specified at the state rather than individual processor level.

(Continued on page 34)



WASHINGTON UPDATE (Continued from page 33)

The July 26 and September 17 allotments, allocations, and reassignments quantities are listed in the following tables:

	July 26 Allot./Alloc. including Reassign.	Corrections	Sept. Reassign- ment	Sept. Allot./ Alloc. including Reassignment		
1,0	00 short to	ns, raw value				
OVERALL BEET/CANE ALL	OTMENTS					
Beet sugar	4,152.2	12.2	0.0	4,164.4		
Cane sugar (incl. P. Rico)	3,617.8	1.0	0.0	3,618.8		
TOTAL	7,770.0	13.2	0.0	7,783.2		
STATE SUGAR CANE ALLC	TMENTS:					
Florida	1,840.1	0.0	85.0	1,925.1		
Louisiana	853.4	1.0	- 28.0	826.41		
Texas	121.9	0.0	0.0	121.9		
Hawaii	710.7		- 52.0	658.7 ¹		
Puerto Rico	91.8	0.0	- 5.0	86.8 ¹		
TOTAL CANE SUGAR	3,617.8	1.0	0.0	3,618.8		
BEET PROCESSORS' MARK	ETING ALL	OCATIONS:				
The Amalgamated Sugar Co.	795.376	1.058	0.000	796.434		
American Crystal Sugar Co.	938.235	1.249	0.000	939.484		
Delta Sugar Corp.	42.201	0.056	0.000	42.257		
Great Lakes Sugar Co.	54.618	0.073	0.000	54.691		
Holly Sugar Corp.	721.215	7.992	0.000	729.207		
Michigan Sugar Co.	248.278		0.000	248.608		
Minn-Dak Farmers Co-op.	189.336	0.252	0.000	189.588		
Monitor Sugar Co.	137.856 277.321	0.184 0.369	0.000 0.000	138.040 277.690		
Spreckels Sugar Co. Western Sugar Co.	471.949	0.628	0.000	472.577		
So. Minn. Beet Sugar Co-op.	251.677		0.000	251.677		
Savannah (ADSEP DIV)	24.122	0.000	0.000	24.122		
TOTAL BEET SUGAR	4,152.184	12.191	0.000	4,164.375		
CANE PROCESSORS' MARKETING ALLOCATIONS:						
FLORIDA						
U.S. Sugar Corp.	718.375	0.000	23.291	741.666		
Growers Co-op. of FL	311.666	0.000	11.604	323.270		
Atlantic Sugar Assoc.	141.577	0.000	15.388	156.965		
Osceola Farms Co.	205.804	0.000	16.879	222.682		
Talisman Sugar Corp.	134.650	0.000	0.000	134.650		
Okeelanta Corp.	327.996	0.000	17.837	345.833		
TOTAL FLORIDA	1,840.068	0.000	85.000	1,925.068		
			(Continue	ed on page 35)		

. .

WASHINGTON UPDATE

(Continued from page 34)

LOUISIANA

LOUISIANA				
Glenwood Co-op.	35.079	0.000	0.000	35,079
Breaux Bridge Sugar Co-op.	28.539	0.000	0.000	28.539
Savoie Industries	38.469	0.000	0.000	38.469
Cajun Sugar Co-op.	51.918	0.000	0.000	51.918
M. A. Patout & Sons	89.448	0.000	0.000	89.448
Raceland Sugars	58.366	0.000	0.000	58.366
St. Martin Sugar Co-op.	33.085	0.000	0.000	33.085
Dugas & Leblanc	38.954	1.053	0.000	40.007
Caldwell Sugars Co-op.	35.457	0.000	0.000	35.457
St. James Sugar Co-op.	43.516	0.000	0.000	43.516
Sterling Sugars	49.019	0.000	0.000	49.019
Iberia Sugar Co-op.	39.196	0.000	0.000	39.196
Alma Plantation	36.126	0.000	0.000	36.126
Caire & Graugnard	8.601	0.000	0.000	8.601
St. Mary Sugar Co-op.	40.609	0.000	0.000	40.609
Harry Laws & Co.	30.597	0.000	0.000	30.597
Cora-Texas Mfg. Co.	61.102	0.000	0.000	61.102
Evan Hall Factory	45.855	0.000	0.000	45.855
Jeanerette Sugar Co.	42.738	0.000	0.000	42.738
Lafourche Sugars Corp.	46.684	0.000	0.000	46.684
TOTAL LOUISIANA	853.357	1.053	0.000	854.411 ²
TEXAS				
Rio Grande Valley				
Sugar Growers	121,899	0.000	0.000	121,899
HAWAII				
Hawaiian Commercial				
& Sugar Co.	226.396	0.000	0.000	226.396
McBryde Sugar Co.	44.498	0.000	0.000	44.498
Kekaha Sugar Co.	52.008	0.000	0.000	52.008
The Lihue Plantation Co.	59.708	0.000	0.000	59.708
Oahu Sugar Co.	80.856	0.000	0.000	80.856
Pioneer Mill Co.	45.465	0.000	0.000	45.465
Hilo Coast Processing Co.	76.924	0.000	0.000	76.924
Ka'u Agribusiness Co.	56.848	0.000	0.000	56.848
Olokele Sugar Co.	46.923	0.000	0.000	46.923
Waialua Sugar Co.	65.161	0.000	0.000	65.161
Hamakua Sugar Co.	125.892	0.000	0.000	125.892
TOTAL HAWAII	880.682	0.000	0.000	880.682 ³
PUERTO RICO				
Coloso	28.925	0.000	0.000	28.925
Mercedita	24.794	0.000	0.000	24.794
Plata	17.311	0.000	0.000	17.311
Roig	20.780	0.000	0.000	20.780
TOTAL PUERTO RICO	91.811	0.000	0.000	91.8114

¹ Reflects the estimated portion of state allotments that will not be filled within each state.

² An estimated 28,000 tons are not expected to be marketed.

³ On July 26, 170,000 tons were reassigned. At this time, an additional 52,000 tons are not expected to be marketed.

⁴ An estimated 5,000 tons are not expected to be marketed.

(Continued on page 36)

WASHINGTON UPDATE

USDA Releases Sweetener Market Data Report for June 1993

On September 17, 1993, USDA's CCC released its Sweetener Market Data Report for June 1993. Report totals in short tons include:

- [®] June 1, 1993, beginning sugar stocks — 3,481,973.
- [©] U.S. beet sugar production for June 1993 - 138,177
- [®] U.S. cane sugar production for June 1993 — 95,999
- © Deliveries for June 1993 811,911, including deliveries for domestic human consumption — 790,179
- [©] June 30, 1993, ending sugar stocks — 3,014,231

USDA October 1993 Sugar Cane Crop Production Report

The forecast production for October 1 is 30.5 million tons. This is 1 percent below the September 1 forecast and virtually unchanged from last year at this time. The 934,600 harvest acres is down from September 1, but is up 1 percent from last year. Louisiana's sugarcane crop is expected to be short due to a late frost and a hot, dry summer. October harvesting began in Louisiana, while mills in Florida opened in middle October.

USDA Determines Sugar Marketing Allotments Unnecessary

On September 30, 1993, the Secretary of Agriculture Mike Espy announced that sugar marketing allotments for domestic sugar would not be established during the first quarter of fiscal year 1993. Espy said this determination is based on estimated import requirements for FY 1994 which will be

(Continued from page 35)

sufficient to avoid the trigger level for establishing marketing allotments under the Agricultural Adjustment Act of 1938, as amended. Re-estimates of fiscal year import requirements will be made quarterly to determine if marketing allotments are to be established later in the fiscal year.

SCIENTISTS HONORED

(Continued from page 29)

It should be added that these and other contributions of theirs, which helped to insure insecticide use only as a final resort when and where needed, reduced the number of recommended insecticide applications used annually from a maximum of 12 in 1956, to an average of less than 2 by 1985.

Dr. Martin continued, "Dr. Hensley received his Ph.D. in entomology from Oklahoma State University and has had a distinguished career as a professor at Louisiana State University and a Research Entomologist with USDA/ARS.

"Dr. Long received his Ph.D. degree in entomology from Iowa State University and has had a distinguished career as a professor at Louisiana State University, as well as a Distinguished Service Professor of Biological Sciences at Nicholls State University.

"Besides developing the program, both Dr. Hensley and Dr. Long have taught, and continue to teach, the principles of Integrated Pest Management through their practices as professional crop consultants.

"It is my pleasure to present the honored guests of the 1993 Inter-American Sugar Cane Seminar with the theme 'Sugar Cane and Our Environment'."

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FOR SALE: 1992 Model Single Row LaCane Harvester in Excellent Condition. Ready to Cut Cane. Call Gerald Hartman at (504) 532-3160.

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FOR SALE: J & L Harvester — 18,000 Hydrostatic; 300 amp. Lincoln Welder; 1 Broussard Loader on IH 856; 856 IH Hi-Clearance Tractor; 1530 JD Tractor; 1630 Cone Disc Harrow. Call (504) 265-3687 or (504) 265-3908.

FOR SALE: 1975 Thompson Harvester with JD Engine; Broussard Cane Loader on David Brown Tractor; Prentice Transloader with Allis Chalmers Engine; 3 Point hitch 5-row Sprayer with 200 gallon tank. Call Talbot Farms at (504) 526-4774.

FOR SALE: Oliver 3-row Cultivator. Call (504) 446-2524.

FOR SALE: IH 1066 High Crop, IH 806 High Crop, IH 1466 Low Clearance, David Brown 1200, White 2-60, 2-IH Hydro 100, Cameco Loader (SP 2000) w/backhoe, single row — Broussard Harvester, 3208 Caterpiller Engine, 2-480 IH Disc Harrow, 2-Mechanical Planters, Prentice Transloader (F700 Ford), Cane Trailer, Various Field Equipment. Call Joseph Boudreaux Farms, Inc. at (504) 447-7685.

FOR SALE: 8' Corrugated Copper Steel Culverts; 12' sections can be joined for longer lengths. Call Frank Martin Farms at (318) 836-5583 or (318) 836-5873.

FOR SALE: 2 new Goodyear 20.8 R38 R & C Tires \$750.00 each OR 2 used Goodyear 20.8 R38 R & C Tires 10 to 15% wear \$625.00 each. Call Talbot Farms at (504) 447-7221.

FOR SALE: 3-row Thomson PTO Drive Shaver like new. Call (504) 446-1129.

IN THE FACTORY

phosphate level in the juice was adequate. The phosphate level can be routinely measured with a chemical test that requires the same spectrophotometer, as used for the haze test on raw sugar or for color determination. It has been generally accepted for a long time that a minimum phosphate level of 300 ppm (as P_2O_5) is necessary for good clarification. The basis for this conclusion is data that was obtained mainly with juice from hand cut cane, and not machine cut cane, with its higher dirt levels. This, in itself, is another area worthy of investigation. Addition of phosphoric acid to the mixed juice is used occasionally in Louisiana, but its high cost usually does not justify its use, unless there are problems with raw sugar quality.

Another question that arises is whether some of the bactericides used on the mill for sanitation would have an adverse effect on clarification. Calcium hypochlorite (HTH) is sometimes used for mill cleaning, but should have no effect on clarification, since its major components are lime and chlorine. Thiocarbamate based materials should have no impact and neither should quaternary ammonium compounds. In fact, the latter are used as clarification aids in some refining operations.

One of the more interesting subjects for study in this area is to try and determine the type of material which, when added to raw juice, will make the juice difficult to clarify. Some anionic surfactants have been found to have this effect and these are used in many commercial detergents. Similar compounds are found in cane, with increased levels in deteriorated cane. However, it is difficult to be certain that the same problems are occurring in juice from deteriorated cane and with artificially spiked juice. Any material which stabilizes the colloids in the juice is expected to have an adverse impact on clarification; starch is an example of this. With the considerable amount of short cane being processed at present by some mills, we can expect higher than normal starch levels in juice and sugar.

If the problems related to poor clarification can be solved, we can confidently expect improved quality of raw sugar and reduced evaporator scaling. More problematic is the impact on sugar recovery and exhaustion of molasses. Removal of the problem colloidal materials from the juice should reduce viscosity and increase molasses exhaustion. Whether the end justifies the means is the question. We already have technologies which will bring us close to the limits of sugar recovery from cane. These technologies are not always applied well. It is important that we perform the basic operations of the factory as well as possible. Improved cane quality, by both variety development and improved cane harvesting and handling, will give us the largest increase in sugar quantity. Improved clarification and crystallization will improve sugar quality, perhaps to the level where it can be sold directly as a consumer product on a large scale, rather than as a novelty.

> SEE, SUGAR CANE PLANTER SALE, PAGE 40

FARM NOTES (Continued from page 6)

experienced thus far, which have not had very much of an effect on maturity. The high temperatures during the middle weeks of October ranged in the mid to high 80s. Some reports of dextran have been made from cane that is not fresh. Once again, growers need to be reminded of the importance of delivering the freshest possible supply of cane. Cold weather would allow the cane to ripen while a frost would help burn off some of the green leaves. This would hopefully provide better sugar yields in weeks to come. The state average following the first three weeks of grinding was less than 190 pounds of sugar per ton of cane.

PLANTING COMPLETED

Because of the dry weather experienced during late September and early October, all growers were able to complete their planting operations with nearly all of the planting finished before growers began harvesting their crop. Some succession planting is expected as growers take advantage of the dry weather, in hopes of getting back into an adequate rotation following the disastrous freeze which affected the 1990 planting.

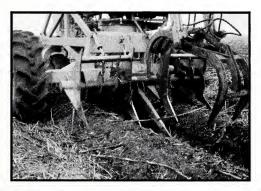
Growers are reminded that recommendations call for fall herbicides to be applied after planting. Research has shown numerous advantages from control of winter weeds. It is suggested that growers make every attempt to follow all recommendations as closely as possible.

THINK ABOUT VARIETAL COLD TOLERANCE

It is not too early to begin to think about cold tolerance among varieties. All growers were mailed a recommended harvesting schedule from their County Agents' Office. As you prepare your own schedule, you are advised to follow the maturity of each variety for stubble crops. However, in the plant cane which is normally harvested last, growers are advised to keep the cold tolerance of the varieties in mind.

The best varieties for cold tolerance remain CP 70-321, CP 65-357, and CP 74-383. These are the varieties which you should have the largest acreage left once you get into late November and especially into December. The order of harvest for plant cane, using deterioration following freezing temperatures as a criteria, would result in the following schedule:

- First: Harvest those varieties which deteriorate the quickest after a freeze: CP 72-356 and CP 79-318.
- Next: Harvest those varieties that deteriorate at an intermediate rate after a freeze: CP 76-331, CP 72-370, LHo 83-153 and LCP 82-89.
- Next: Harvest those varieties that deteriorate at a slow rate after a freeze: CP 74-383 and CP 65-357.
- Last: Harvest the variety that deteriorates at the slowest rate after a freeze: CP 70-321.



SEE, SUGAR CANE Planter Sale, Page 40

SUGAR CANE PLANTER SALE

During the past year the League contracted to have several planters constructed or modified for demonstration and evaluation purposes. The American Sugar Cane League's Board of Directors has decided to retain ownership of the Hearne Planter, but is offering for sale the Quality Industries Planter. Both performed admirably in the testing.

Any League member wishing to submit a bid in excess of \$10,000 will be allowed to do so by November 30, 1993. As part of the proposal, a grower-member offered to buy this planter for \$10,000 prior to its construction. This grower-member will be given the opportunity to match or surpass any and all bids. He has the right of first refusal. If this grower-member chooses to offer as much or more than others, then he will retain the planter. If this grower-member chooses not to match or surpass the higher amount offered, the machine will go to the person who offered the most. In the event of a tie, the offerers will be allowed to bid in auction style. The machine would then go to the highest and final bidder.

BUS TRIP 1994

Because of the extreme interest in harvesting and loading equipment, which can improve the quality of delivered cane, the League is planning a field trip to the Florida sugar industry. Exact dates and the final itinerary have not yet been set, but it is expected that the trip will take place during late January or early February. We expect to see different brands of combine harvesters, hand harvesting, continuous loaders, and various cane transport equipment. The cost of the trip should be comparable to previous League bus trips, and will be approximately seven days in duration.

We will also attempt to see some of the vegetable and citrus industries, as well as a stop at one of the many tourist spots in Florida.

Since there will probably be many people interested in making the trip, we will handle reservations on a first-come, first-served basis. If you are at all interested in making this trip, please fill out this form and return it to the League office as soon as possible.

		BUS TRIP 1994	
Name:			
Address: _			
City:		State:	Zip:
Phone Nu	nber:		
Return to:	American Sugar Cane	e League, P.O. Drawer 938, Thib	odaux, LA 70302-0938

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OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U.S.A.

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 72 — No. 3

DECEMBER, 1993

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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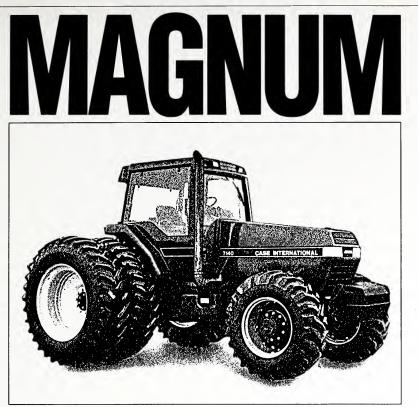
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UP FRONT WITH THE LEAGUE By Charles J. Melancon

As I sit in this office today contemplating the contents of this article, it seems hardly possible that we have already been through October and the better part of November. The grinding season got off to a fairly normal start, only to have an early light freeze and abnormal amount of rain appear just recently. Hopefully, mother nature will cooperate and bring us good weather, and a little more sugar per ton between now and the end of the grinding season.

As all of the readers of the bulletin know by now, the NAFTA, with a sugar side letter, was passed by the U.S. House of Representatives on Wednesday, November 17, 1993. Consequently, the Senate took similar action on the following weekend. For the last several years, preceding my coming to the League, the NAFTA was considered to be the most omnibus threat to Louisiana and the domestic sugar industry, almost as devastating as the Mosaic Plague of 1927. The NAFTA threatened to politically wipe out the sugar industry through a give away loop-hole in the agreement that was either by design or by happenstance.

Regardless, a lot of people deserve thanks for their efforts in finalizing an acceptable agreement between the United States Government and that of Mexico. The Clinton Administration, and particularly, Ambassador Mickey Kantor, along with Senators John Breaux and J. Bennett Johnston, the Louisiana Congressional Delegation, and those members of Congress that stuck by the sugar industry so diligently and so long. Last, but not necessarily least, our Washington representatives, Don Wallace and Macon Edwards, their staff, and the staffs of the other Washington representatives for the other sugar producing states. There were many meetings that dragged from early afternoon until early morning hours, and resumed at early morning hours until late night, as the sugar issue was hammered out between the two governments (U.S. and Mexico). These were not meetings of public note, but working, deliberative meetings of substance. Regardless, the end result is that sugar was successful in obtaining a side letter of agreement, correcting the most obvious threat to our industry in decades. There were some additional minor flaws in the NAFTA, none of which could decimate this industry. We will continue to monitor these other minor areas of concern.

The move from an anti-NAFTA position to a pro-NAFTA position by the American Sugar Cane League was not one that was done on the spur of the moment. To be honest, I probably was the only person who felt we should delay outward support for NAFTA; but instead, take a few days to assess the situation, and then, make a decision. The discussion was held by the League's officers, our Washington representatives, and me. My major concern was in taking an industry and its people, who have been convinced over the last two years that NAFTA was not a good deal for the sugar industry, and to bring them 180 degrees from a position of opposition to a position of support without any

(Continued on page 24)

THE SUGAR BULLETIN

WASHINGTON UPDATE WITH DON WALLACE

Nafta Passes House; Sugar Deal Included

On November 17, 1993, the U.S. House of Representatives passed the North American Free Trade Agreement by a vote of 234 to 200. Included in this NAFTA was a side letter of agreement signed by the U.S. and Mexican Governments to correct the defect on sugar. This agreement cleared up any question that Mexico could become a net surplus producer of sugar, and unfairly increase its sugar exports to the U.S. The agreement also declared that high fructose corn syrup cannot be substituted for sugar to create a Mexican sugar surplus. Should Mexico become a net surplus producer of sugar after six years of this agreement using this new surplus formula, Mexico may increase its sugar exports to the United States from 150,000 tons a year to 250,000 tons a year through year 15. This increase in the Mexican sugar would not increase the overall import quota to the United States as allowed under the General Agreement on Trade and Tarriffs (GATT). Senator John Breaux and the American Sugar Cane League issued the following press releases once the sugar agreement was finalized.

AMERICAN SUGAR CANE LEAGUE OF THE U.S.A., INC. PRESS RELEASE, NOVEMBER 4, 1993

The American Sugar Cane League announced today that a side letter of agreement will be signed by the United States Government and the Government of Mexico to correct the defect in the North American Free Trade Agreement that would have caused severe economic dislocation in the Louisiana and domestic sugar industries.

Senator John Breaux (D-LA), a member of the Senate Finance Committee which oversees trade issues, and a long time spokesman for Louisiana sugar interests, took the lead several months ago in forging the agreement announced this week on the sugar issue. For this leadership, the American Sugar Cane League and the sugar producers and processors in Louisiana and the United States appreciate tremendously the successful efforts of Senator Breaux. Additionally, the entire Louisiana Congressional Delegation made it very clear to the Clinton Administration that sugar's problems were legitimate, and had to be resolved before they could give any consideration to an affirmative vote for NAFTA. Without the support of Senator Breaux and Senator Johnston, the Louisiana House Delegation, the Clinton Administration, and particularly, Ambassador Mickey Kantor it is felt that the sugar industry would have been devastated in the NAFTA as originally drafted. Without this unified effort. Louisiana stood to lose a billion dollar industry that has been in this state for approximately 200 years. It would have caused extreme economic hardship in 22 of Louisiana's 64 parishes located in the south and central portion of the state.

(Continued on page 16)



FARM NOTES By Dr. Charley Richard

ANOTHER EARLY FREEZE — CROP REPORT MUD ATTACHED TO CANE ROOTS AT THE MMILL

For the third time in five years, an early freeze (earlier than November 6) has hit the Louisiana sugarcane crop. This year, damage was caused by freezing temperatures which occurred almost throughout the entire belt on October 30 and 31. Temperatures as low as 26°F were recorded in the more northern areas of the belt. Immediate observations indicated dead terminal buds as well as injury to several joints below the terminal in shorter cane which had less than normal canopy coverage. The northern and western areas of the belt had suffered for water during the growing season, and as a result, these two areas had more short cane than the rest of the belt. This short cane with little canopy coverage and very immature top joints, which had attempted to grow late, were easily affected by the killing temperatures. Temperatures during the weeks following this freeze have fluctuated greatly, and there have been several days where high temperatures have reached 80°F. Areas which were most affected by the freeze include areas from Donaldsonville north, and the more western areas of the cane belt. It is anticipated that this killing freeze will not only adversely affect the tonnage that can be harvested from some of these fields, but also, will certainly reduce the sugar per ton of cane that would have been harvested from these fields. Taller cane can be topped below the injured portions of the stalk and will be affected less. Growers are reminded to follow the harvest schedule for plant cane that is distributed by the LSU Cooperative Extension Service and printed in this author's previous article. This will help to reduce the impact the freezing temperatures will have on the varieties remaining in the field.

CROP REPORT

As of this writing on November 15, the industry is approximately 50% completed in the 1993 harvest season. Most growers continue to report cane tonnage a little higher than predictions; however, sugar per ton of cane remains far below expectations. After several vears of 200 plus CRS values, growers have gotten spoiled with regards to the potential that the varieties offer in terms of recoverable sugar. To date, the industry is reporting a sugar yield of less than 190 pounds of sugar per ton of cane. Some growers are skeptical about the level of maturity in the cane, and are convinced that the cane should have a better yield than it currently does. All test data, whether it is variety tests or tests on different factors from anywhere in the state, indicate that sugar content is below the level it has been for the last several vears.

Many growers are indicating that Polado did not work at all, or at least not as well as normal. One test which consisted of nearly 700 tons of second stubble CP 70-321 that League Agronomists were able to harvest in the Jeanerette area provided the following results.

Treatment		Sugar per ton of cane	Sugar per acre
Polado	29.1	241	7029
No polado	31.8	210	6696
Difference	-2.7	+ 31	+ 333

(Continued on page 12)

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THE BATON ROUGE LINE By Tom and Linda Spradley

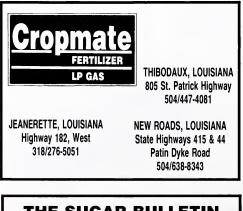
Special Session(s)

The passage of the constitutional amendment, in October, that restricts legislative sessions to fiscal matters every other year is becoming a hot topic. The first year in which the amendment takes effect in 1994, and therefore, the regular session will be a "fiscal issues only" session.

While most legislators supported the amendment, many now are wondering what they've got themselves into. There are already rumors that special sessions will be called to deal with crime, health care, and dockside gambling. The uncertainty of the timing of a special session makes it difficult to plan ahead.

The Governor's Race

Only in Louisiana would political conversations focus on a governor's race that is two years in the future. Governor Edwards already had announced his candidacy — and has a \$3 million warchest to prove he's serious about running. It is likely that Treasurer Mary Landrieu, Secretary of State Fox



THE SUGAR BULLETIN (504) 448-3707

McKeithen, and David Duke will announce in the next couple of months. Several others, including Buddy Roemer and Dave Treen, have raised speculation about their candidacy.

An interesting aspect of this situation could take place in the Republican Party. The Republicans are considering holding a "primary" of their own where the voters would be members of the Party. There is some talk that candidates could only be placed on the ballot if they agree to abide by the results and let the number one vote getter be the Party's candidate. McKeithen appeals to many Republicans who hope that his appeal to rural areas could discourage Duke from running again.

Treasurer's Race

Representative Steve Theriot (D-Marrero), Chairman of the House Ways and Means Committee, is running for Treasurer, regardless of whether or not Mary Landrieu decided to run for governor. Theriot is a CPA who has been one of the more vocal voices for reform on fiscal issues.

Special Harvest Permit

As many of you are aware, Governor Edwards has directed the Secretary of the Department of Transportation and Development (DOTD) to issue a special harvest season permit to operators of vehicles loaded with sugar cane, with certain restrictions. Our thanks to the governor, and to Senator Mike Foster, who contacted the governor on behalf of the League. We will be working with the governor, Senator Foster, and other sugar floor leaders to reach a permanent solution to this annual problem.

IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

NO-FRILLS SUGAR TECHNOLOGY

A friend in the cane sugar refinery business recently went to Europe to look at some developments in equipment for the industry. He visited several new and modernized beet factories, and some of his comments were that they had spent an enormous amount of money, that there was much more installed capacity than necessary, and that all of the equipment was state of the art with automatic controls, computer monitors, etc. Given the rate of increase of costs of equipment and construction, it makes sense to install additional capacity at the initial construction if this is possible. On the other hand, there is a tendency towards gratification of the designers of the factories in the incorporation of the latest and most elaborate technology, even though the performance of the factory may not be much improved.

Our goals in the application of new technology to the industry should be both economy and simplicity, involving the most efficient use of manpower and equipment, while not sacrificing either recovery or sugar quality. Much modern equipment is more efficient with lower energy consumption, e.g. new centrifugal designs, but I cannot but wonder if some of the elaborate peripheral technology is really necessary, and whether it distracts from the basic operations taking place in the factory.

Achievement of the goals of efficiency and simplicity requires trained engineers and technologists well-versed in basic operating principles. This crop I have seen several instances of problems being caused by neglect of these principles, and I will touch on these later in the article. It is most important that the industry maintain a high level of competence in the areas of sugar engineering and process technology. Their training needs to be in the broad areas of engineering and/or chemistry, as well as the specialized aspects of sugar factory operation. A quick review of the mills in Louisiana suggests that only about half of them have senior engineers and fabrication superintendents who will still be working at the turn of the century. They cannot be replaced by automated systems run by computers operated from a control room. The sugar industry is one of the most "hands-on" type of processing industry since the raw material and operating conditions are constantly changing.

The industry is facing increasing competition, and at the same time, greater intrusion by governmental and other organizations. Dealing with the regulatory agencies is taking an increasing amount of time of senior management. We may be at the point where specialization in the environmental aspects of the industry may be required, along with the traditional sugar engineer and process technologists/chemists. We must be careful to ensure that such specialists are fully aware of the nature of and constraints on the industry, and are supportive of its continued development, rather than having an agenda (Continued on page 13)



To: All Sugarcane Farmers

La Cane is a sugar cane equipment company formed in January of 1987, by two lifelong employees of Thomson Machinery, the oldest sugarcane equipment manufacturer ever.

La Cane Is now owned & operated by Jim Collinson, President, Danny Morvant, Vice President and Controller, and Ken Caillouet, Vice President in charge of engineering.

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Those of you who have purchased new equipment from La Cane, have said with more than just words, that you believe in us and belleve in what we are doing. Your support has helped us to be the success that we are today.

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FARM NOTES (Continued from page 6)

Although the tonnage was reduced by 2.7 tons per acre because of the Polado, the sugar per ton was increased by 31 pounds. This resulted in an increase of 33 pounds of sugar per acre with the Polado treated cane over the non Polado treated cane. All of the results were significantly different, and indicate that the Polado worked in this particular test. Cane heights averaged seven feet in the treated area and nearly eight feet in the non-treated area. This area apparently did not suffer for rain as much as other areas of the belt. Many of the reports of Polado not working come from areas that suffered from the drought, or at least, had considerably dry weather at the time of application of Polado. It is suspected that Polado applications during hot, dry weather on cane not actively growing resulted in poorer results than growers normally anticipate. The fact that some growers did not use Polado this year has also contributed to the lower sugar per ton yields that are being recorded in 1993.

MUD ATTACHED TO CANE ROOTS AT THE MILL

League agronomists have, over the last several years, noted what seems to be an increase in the amount of soil which is attached to the base of cane stalks after harvest. This soil, attached to the stalks' roots, is a problem resulting from the cane harvester, although the loader operator often gets the blame for a high sediment reading at the mill. There have been considerable improvements made to cane pilers. and although they are not yet perfect, they can perform significantly better than older push pilers and even better than older chain pilers. The soil attached to cane stalks, however, is a problem that has not vet been solved. In some cases, this is due to harvester operator error in cutting too deep. In other cases, however, there seems to be no apparent reason why the cane stalks carry some roots and soil with them to the heap. This is one area that research is still needed in order to improve the efficiency of the machinery that is currently being used.

Of course, when mud reaches the mill it doesn't matter where it comes from, it is still reported as mud. High sediment readings at the core lab will negatively affect your payment. Often times growers, knowing they have done a good job of loading cane, often disagree with the core lab results until they have an opportunity to see the unusual amount of soil that is being transported to the mill from this particular source. An attempt should be made to remedy this source of mud if this industry is to make an additional improvement in its efficiency.



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IN THE FACTORY

unsympathetic to the industry. One of our problems in dealing with environmental concerns has been the attitude in the past that they did not matter. Our ability to answer the environmental concerns is limited by our lack of data to demonstrate what we know from experience, that the sugar industry, run properly, is environmentally benign. Again, we need to pay attention to basic principles and avoid getting caught up in the frills and details that can distract from maintenance of a good operation.

The trend in modern technological development is towards more automatic control and easily accessible data display on video systems. The danger is that there might be too much reliance on such systems with the assumption that the monitors and controllers are infallible. Although we may know that this is not the case, for ease of life we tend to have faith in such systems, especially those responsible for their installation. Conversely, we may have no confidence in the systems and ignore them when they are indicating an abnormal situation.

pH control in raw cane juice clarification is essential. The practice in Louisiana is to run the clarified juice pH below 7, usually in the range 6.2 to 6.6. The practice in more tropical countries is to operate at a clarified juice pH of 7 or slightly above. The difference between the two may appear to be quite small, but there can be a significant adverse consequence of operating at too high a pH in Louisiana. The principle of automatic pH control is simple but the practice is far from simple. Electrodes easily become fouled and the mechanical lime dosing systems, controlled by a pH

(Continued from page 9)

meter, require regular attention. Some problems of raw sugar quality found at one mill this season can be related to poor control of the juice pH, especially when the pH runs high. The automatic control system was assumed to be working, but there was little note taken of the laboratory recorded data on clarified juice pH.

Some more modern technologies which may soon be applied to the cane industry, such as chromatographic recovery of sucrose from molasses, will require sophisticated computer control at a level not now found in the industry. Even so, we must be careful to keep all such systems as simple as possible, avoiding overcomplex systems and the often enjoyable but confusing frills that the computer industry now makes available.





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WASHINGTON UPDATE

To this end, the American Sugar Cane League believes that the North American Free Trade Agreement, with the attachment of the "sugar" side letter, will be good for the future economic prosperity of this state, this country, and the new North American trade block. We further believe, and urge, that the Louisiana Delegation should vote for this greatly improved agreement now that President Clinton and Ambassador Kantor have demonstrated their good faith and concern for the domestic sugar industry.

SENATOR JOHN BREAUX STATEMENT ON SUGAR AGREEMENT FOR NAFTA

NOVEMBER 4, 1993

I am pleased to announce that a very significant agreement has been reached

(Continued from page 5)

between the United States and Mexico affecting NAFTA and particularly sugar.

This agreement is a product of intensive negotiations by the trade representatives of our two countries whose positions have been guided by the sugar industries of both nations.

This agreement is fair to both Mexico and the United States, and will allow the sugar producers from both countries to prosper.

I am optimistic that this agreement eliminates a major obstacle to the adoption of the NAFTA by the United States Congress. Clearly, if the sugar problem had not been corrected there is no way the NAFTA could be passed by the United States Congress. But with this agreement, I am confident that NAFTA

(Continued on page 17)



WASHINGTON UPDATE

has now turned the corner and is headed for final congressional approval.

The sugar industry covers a vast area of the United States with production in 17 states, including the sugar cane areas of the South and Hawaii as well as the beet producing states of the north and midwest.

This agreement essentially clears up any questions concerning when Mexico can become a net surplus producer of sugar and unfairly increase its sugar exports to the United States. The agreement spells out that high fructose corn sweeteners cannot be substituted for sugar to create a Mexican sugar surplus.

However, if Mexico, using this new

(Continued from page 16)

surplus formula, should become a net surplus producer of sugar after year six of the agreement, Mexico may increase its sugar exports to the United States from 150,000 tons a year to 250,000 tons a year through year 15. After that time Mexico has unlimited access to U.S. sugar markets.

This increase in the Mexican sugar quota would not increase the overall import quota to the United States as allowed under the General Agreement on Trade and Tariffs (GATT).

The following table explains the differences in NAFTA with and without the sugar side agreement.

		UGAR PROV	ISION CHANC	GES:		
	Old NAFTA		New NAFTA: \	New NAFTA: With Side Letter		
- <u>s</u>	Sugar production Sugar consumption Surplus/deficit	<u>n</u>	 Sugar produce Sugar and I Surplus/defi 	HFCS consumption		
			U.S. Sugar Ma			
	Old NAFTA			With Side Letter		
Year	If Mexico is not surplus producer	If Mexico is surplus producer	If Mexico not surplus producer	If Mexico is surplus producer		
1 - 6	Traditional % (approx. 7,000 tons)	Up to 25,000 tons of surplus production	No change n	No change		
7 - 15	Traditional %	Up to 150,000 tons of surplus productic in year 7, growing 10%/yr. (322,000 tons in year 15) *		Up to 250,000 tons of surplus production *		
	* If surplus producer 2 consecutive years: unlimited access for all surplus production.		* Unlimited access p eliminated	provision:		
After 15	U.SMexican common market for sugar — same support levels, external tariffs. Only limit on trade: rules of origin — we can send each other only domestically produced sugar, except for tolling or re-export program.					

(Continued on page 19)



Federal Land Bank Association of South Louisiana



 Baton Rouge
 Opelousas
 Image: Complexity of the second sec

WASHINGTON UPDATE

Sugarcane Crop Production Report

The November 1 production forecast, 30.4 million tons, was virtually unchanged from both October 1 and last month. Available for harvest are 934,600 acres, which is unchanged from October 1. However, this acreage is one percent above this figure from a year ago. Harvest started in all areas with only a few delays reported. All mills in Florida were operating by November 1.

U.S. Sugar Production Report

U.S. sugar production in fiscal year 1993/94 is projected at 7.4 million short tons, raw value, down 60,000 tons from last month. The revised projection is based on National Agricultural Statistics Service sugar beet and sugarcane production forecasts. Beet sugar production is expected to be down 50,000 tons from last month's projection, mostly because of lower sugar beet yields in Minnesota, North Dakota, California, and Michigan. Lower yields in Texas account for a 10,000 ton reduction in the cane sugar production forecast.

Revised 1992/93 production, imports, deliveries, and ending stock estimates are based on fiscal-year data collected by the Agricultural Stabilization and Conservation Service from sugar mills, sugar beet factories, and sugar refineries. These data imply unaccounted-for use or over-reported supply of 169,000 tons. Domestic deliveries in 1992/93 increased 2.7 percent. Deliveries in 1993/94 are forecast to increase 1.7 percent, slightly below the 5-year average growth rate. Ending stocks for 1992/93 included approximately 186,000 tons of beet sugar in excess of marketing allotments, which were in force from July through September 1993. Excluding these excess

LASERPLANE Machine Control Systems

(Continued from page 17)

1992/93 also are revised.

stocks, the stocks-to-use ratio in 1992/93 was 14.5 percent. Ending stocks in

1993/94 are forecast at 1.0 million tons,

down 200.000 tons from last month's

forecast. Production and deliveries in

(Continued on page 20)

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WASHINGTON UPDATE

ITEM	1991/92	1992/93	1993/94 F	Projections
	1991/92	Estimate	October	November
		1,000 short to	ns, raw value)
Beginning stocks ²	1,496	1,450	1,709	1,599
Production ²	7,238	7,831	7,460	7,400
Beet sugar ³	3,845	4,392	4,020	3,970
Cane sugar 4	3,393	3,439	3,440	3,430
Imports 2 ^{***}	2,192	2,040	1,815	1,815
Under quota ⁵	1,486	1,335	1,165	1,165
Other ⁶	706	705	650	650
Total supply	10,926	11,321	10,984	10,814
Exports ² ⁷	630	486	570	580
Domestic deliveries ²	8,826	9,067	9,200	9,225
Domestic food use	8,727	8,912	9,060	9,095
Other ⁸	99	155	140	130
Miscellaneous 9	20	169	0	0
Use, total	9,476	9,722	9,770	9,805
Ending stocks ² ¹⁰	1,450	1,599	1,214	1,009
Stocks to use ratio 10	15.3	16.5	12.4	10.3

WASDE-284-24 U.S. Sugar Supply and Use ¹

¹ Fiscal years beginning Oct. 1. Puerto Rico not included. ² Historical data are from ASCS, "Sweetener Market Data." ³ The 1993/94 beet sugar production forecast is based on forecast sugar beet production in the Nov. 9 "Crop Production" report. Sugar recovery from beets is an Interagency Sugar Estimates Committee forecast. 4 The 1993/94 cane sugar production forecast is based on forecast sugarcane production in each state in the Nov. 9 "Crop Production" report, less estimates of production for seed. Hawaii is adjusted to obtain a fiscal year estimate. Sugar recovery from cane is the 1988-92 average for each state, excluding the high and low years. 5 Actual arrivals under the quota with late entries and quota overfills assigned to the fiscal year in which they actually arrived. The 2-year tariff rate quota for 1992/93 and 1993/94 is 2.5 million STRV. 6 Quota exempt imports (for reexport, for polyhydric alcohol, from Canada, and high-duty). Imports of flavored sugar and other products with very high sugar content are not included. The estimated sugar content of imports of selected sugar-containing products in 1991/92 was about 175,000 STRV, including 70,000 tons entered under Section 22 import quotas. 7 Includes shipments to Puerto Rico. Other exports are mostly reexports. ⁸ Transfer to sugar containing products for reexport, for polyhydric alcohol, and feed. 9 CCC disposal for domestic nonfood use, and residual. ¹⁰ Ending stocks for 1992/93 include about 186,000 tons of sugar in excess of 1992/93 marketing allotments. If excess stocks are excluded, the stocks to use ratio is 14.5 percent.

BUS TRIP 1994

Because of the extreme interest in harvesting and loading equipment, which can improve the quality of delivered cane, the League is planning a field trip to the Florida sugar industry. Exact dates and the final itinerary have not yet been set, but it is expected that the trip will take place during late January or early February. We expect to see different brands of combine harvesters, hand harvesting, continuous loaders, and various cane transport equipment. The cost of the trip should be comparable to previous League bus trips, and will be approximately seven days in duration.

We will also attempt to see some of the vegetable and citrus industries, as well as a stop at one of the many tourist spots in Florida.

Since there will probably be many people interested in making the trip, we will handle reservations on a first-come, first-served basis. If you are at all interested in making this trip, please fill out this form and return it to the League office as soon as possible.

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WASHINGTON UPDATE

USDA Appointments

USDA and the White House are trying to break the appointment logjam at USDA by getting several career employees to switch to "schedule C" political status. Agreeing to the switch are Dallas Smith, tapped for the position of deputy under secretary for commodity programs, and Randy Weber, headed for the No. 2 spot in the Agricultural Stabilization and Conservation Service. Christopher Goldthwait, who is trying to hold on to foreign service officer status, will likely get the Foreign Agricultural Service (FAS) general sales manager job anyway. Joe O'Mara, candidate for FAS administrator, is unlikely to be able to retain career status and become FAS head.

The White House announced that Fred Slabach will be nominated for the assistant secretary for congressional relations spot at USDA. Slabach is the associate dean of the Mississippi College of Law, and previously served as an aide to former Sen. John Stennis, D-Miss.

Arkansas farmer, Marion Berry, is being considered as a replacement for Miles Goggans for the post of special assistant to the president for agricultural and rural affairs. Goggans, a former aide to Sen. David Pryor, D-Ark., resigned in early September. Berry is known as a Friend of Bill's, and some say he is the favorite farmer of President Clinton. Berry, appointed by then Governor Clinton, is currently a member of the Arkansas state soil and water commission. He lives in Gillette, Arkansas County, grows rice and soybeans on his farm.

American Sugar Alliance Officers

Newly-elected chairman of the American Sugar Alliance is Dalton

(Continued from page 20)

Yancey, Washington Representative for the Florida Sugar Cane League and the Rio Grande Valley Sugar Growers. Reelected vice chairman for 1993-94 is Martin Andreas, executive vice president and assistant to the chairman of the board of Archer Daniels Midland Company. Elected secretary-treasurer is Luther Markwart, executive vice president of the American Sugarbeet Growers Association.

GATT UPDATE

With the Congressional approval of NAFTA, an agricultural agreement within the Uruguay Round is not far behind. However, some other areas like steel, electronics, textiles, meritime, etc., may continue to impose impediments for completion within the Round. According to a USDA official, a deal between the U.S. and Japan was made with regard to rice. The establishment of a multilateral trade organization will also be discussed by negotiators. If an agreement is reached by December 15th, this would enable the President to notify the Congress that he "intends to enter into an agreement," thereby, starting the fast-track process for congressional ratification. Congress would then have 90 legislative days from December 15th to April 15th in which to consider the agreement. Negotiators will return to Geneva after Thanksgiving and work towards an agreement until December 15th.

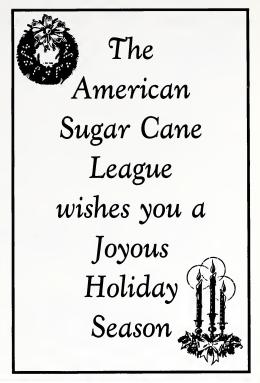
USDA Reorganization and Budget Recision

The reorganization of USDA has been preempted by other issues facing Congress, and slowed by the introduction of budget recision packages. The (Continued on page 23)

WASHINGTON UPDATE

(Continued from page 22)

Administration's budget recision package is designed to reduce outlays by \$13 billion to \$15 billion over 5 years. A bi-partisan group of House members led by Reps. Penny (D-MN) and Kasich (R-OH) have also introduced a recision package that would cut spending by \$100 billion over 5 years. This package includes several agriculture provisions, that is the reorganization of the USDA, and the streamlining of field offices. Additional provisions would include initiation fees on all future transactions, reduction of PL-480 program, and reduction of USDA's buildings and facilities account to zero. The House Agriculture Committee has already approved cuts to save \$1.64 billion over five years by reducing personnel and overhead costs.





UP FRONT WITH THE LEAGUE

forewarning, However, in hind sight, I must admit that I feel that our Washington representatives were absolutely correct in advising us to take a position in favor of NAFTA.

As time goes on, there is no question in my mind that there will be some concerns and anxiety on the part of some people in the sugar industry as to whether the NAFTA will be harmful or not to the Louisiana and domestic sugar industry. Those concerns, whether imagined or real, are legitimate. We will all watch the evolution and the effects of NAFTA through time. All in all, the good faith shown by the Clinton Administration, in their successful efforts in achieving a resolution for our concerns, deserved no less than the support of this industry. The side letter to the NAFTA agreement was sent to you earlier by mail, and is also included in the Washington Update in this issue.

As we move into 1994, we face new challenges and concerns. Maybe issues not as major as the NAFTA, but still of eminent concern. We feel that the Uruguay Round of GATT is moving in a direction that is more favorable to this industry, and if GATT should become a reality, some of the fears that were held previously appear to have been allayed. Next year will mark the beginning of conversations and discussion within the industry as we move towards the 1995 Farm Bill. I perceive this will be a most difficult undertaking with the mood of the Congress in the United States to cut budgets. Additionally, the Congress itself has moved to a more consumer oriented representative body, and the general perception that sugar, as well as all other commodities, are subsidized and are in need of scrutiny. We will need to work hard and wisely during the negotiations of the 1995 Farm Bill.

To this end, I ask that all of you who have a stake in the sugar industry of Louisiana consider very strongly the fact that it is extremely important to be an active participant in Washington, if we are to remain in business. Our Washington representatives, the leadership of your organization, and the staff will continue to do all that is possible. However, without a commitment by each and every grower and processor, personally, and the commitment to fund the PAC to its fullest potential negates our ability to communicate our side of the sugar story to each and every member of Congress. I realize it is a hardship, particularly with the last several years of not having been the best years for sugar growing; but, as I think most of you are aware, the political involvement by the sugar industry is necessary if we are to continue and prosper. The only other element that can have a devastatingly adverse impact is mother nature. Then, only prayer can help. Otherwise, only a healthy political action fund can help us with the other problems that affect this industry of ours. It's up to you. If you haven't already paid your PAC dues, please consider doing so. NAFTA was only one test - There are more!



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Vol. 72 – No. 4

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JANUARY, 1994

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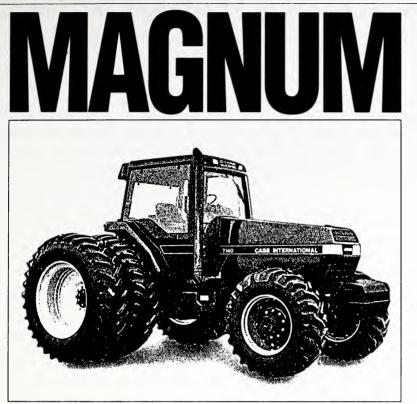
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UP FRONT WITH THE LEAGUE By Charles J. Melancon

I guess I was so preoccupied with the NAFTA and other things going on this past month that I neglected to extend Happy Holiday wishes to the readers of the bulletin. So belatedly, I hope that you and yours had a Merry Christmas and a Happy New Year. I also hope that 1994 will be a good one for you personally, and for the sugar industry, particularly the Louisiana sugar industry.

By the time you receive the January issue of the bulletin we will have had a demonstration of the experimental tworow chopper harvester for those members who had the time to go to Jeanerette. I appreciate those who took the time to view the harvester and transportation system. I had an opportunity just prior to this demonstration to visit the Jeanerette farm where the equipment was working, along with several members of the American Sugar Cane League's Farm Machinery Committee. The weather was dismal and the field conditions were awful. There were still some hydraulic problems that had not been eliminated on the machine, and yet, this group watched the harvester proceed through the field at a decent



rate of speed and doing an acceptable job. Realize that I did not say fantastic; but the mere fact that this experimental machine was cutting cane at an acceptable rate tells me that the concept utilized is a workable concept that needs some refinement and adjustments, just as the original two-row harvester did when it first made its debut a number of years back.

I have a concern for the people in the industry who have a negative attitude about the research being done in this area. Much of it is unfounded. Many of you will recall that there was a lot of negative feelings about the possibility of success with the first two-row harvester; yet, the two-row harvester has become one of the major advances of the Louisiana industry in recent history.

I guess the point that I am trying to make is that at some point in time the environmentalist and those citizens who are tired of having smoke fill their houses during the grinding season; the municipalities, parishes, and the state police and highway departments who are tired of the abundance of debris and mud on our state's roads; and, the possibility and probability that there will no longer be a place available to dispose of the large amounts of mud that have been brought to the mills from the field; and, there may come a day when the mills are unable to meet the BOD release levels set out by environmental regulators. When any or all of these dilemmas become a reality, and we as an industry have not at least ventured to offer a solution, it will be highly unlikely that there will be much

(Continued on page 19)

WASHINGTON UPDATE WITH DON WALLACE

Nafta Signed By President Clinton

President Clinton, on December 8, 1993, signed the North American Free Trade Agreement implementing legislation (H.R. 3450) into law. During this event the President stated that the NAFTA issue turned out to be a defining moment for our nation.

The House of Representatives passed the NAFTA on November 17 by a 234-200 vote margin. House passage was a touch-and-go situation until the final days, when NAFTA gained the momentum it needed to pass. Senate approval had been seen as assured, and it passed on November 20th. The NAFTA was approved by the Mexican Senate by an overwhelming vote of 56 to 2. The Canadian Parliament previously approved the pact in May, 1993. However, the recent Canadian national election resulted in a change in ruling parties. The new Prime Minister, Jean Chretien, who during the election had reservations about NAFTA, has now said he will support the agreement.

NAFTA will take effect January 1, 1994, and will remove or reduce trade barriers among the United States, Mexico, and Canada over a 15 year period from 1994 through 2008.

House Ag Subcommittee Holds Hearings on USDA Reorganization

The House Agriculture Department Operations and Nutrition Subcommittee held a hearing on December 8th on the reorganization of USDA. The subcommittee will also hold field hearings in nine states over the next two months on the Administration's reorganization plans. Subcommittee Chairman Charles Stenholm (D-TX) announced that on February 8, 1994, they would mark-up the bill. However, House Agriculture Chairman Kika de la Garza (D-TX) warned that the full committee will not approve the Administration's legislative proposal to restructure USDA until other government departments outline similar plans. Chairman de la Garza said he would send a letter to Vice President Al Gore as a notification that the full committee would not finalize any plan until "every department makes the same proportionate" cuts in funding and employees.

In September, the department announced that it would cut 7,500 jobs and close more than 1,200 county field offices over the next five years in a move to reorganize the government's largest department. In addition to those cuts, the number of agencies within the department would be consolidated from 43 to 30, and the number of sub-Cabinet level positions cut from 14 to 6. Secretary of Agriculture Mike Espy explained that these cuts would translate into approximately \$2.3 billion in savings over the next five years.

Top USDA Officials Sworn In By Espy

Four top officials were sworn in last Tuesday by Secretary of Agriculture Mike Espy. They are three agency administrators: Grant Buntrock of the Agriculture Conservation and Stabilization Service, previously head of the Washington office of the National Farmers Union; Michael Dunn of the Farmers Home Administration, formerly vice president of government operations for the National Farmers Union; Wally Bever of the Rural Electrification Administration, a former general manager of Verendrye Electric Cooperative, Inc., Velva, N.D.; and the department's chief financial officer, Anthony Williams, previously the comptroller of the state of Connecticut.

(Continued on page 14)

FARM NOTES By Dr. Charley Richard APPRECIATION TO OUR COOPERATORS — EXTENSION GROWER MEETINGS AMERICAN SOCIETY OF SUGAR CANE TECHNOLOGISTS

On behalf of all of the scientists who conduct research for the benefit of the Louisiana sugar industry, I would like to express appreciation to the growers and processors who make this work possible. The contribution of cane, labor, equipment, and time from growers, as well as the assistance of mill personnel. scale house workers, and core lab crews make this research possible. The generosity of growers and processors means a great deal to not only the scientists, but to the industry as a whole. Without the research program that is conducted by the many scientists at the state's Universities, the USDA, and the League, this industry would not be in as good a condition as it is currently. Much more research will be needed in order to successfully compete in a global economy now that NAFTA has passed and GATT is final. Continued assistance from our numerous cooperators will be crucial for this research to be conducted at minimal costs.

To all of our cooperators, we extend a great big thank you. We look forward to many more years of cooperative efforts.

EXTENSION GROWER MEETINGS

The spring grower meetings held each year by the Louisiana Cooperative Extension Service are now being scheduled. With the pinch that most growers find themselves in as a result of rising costs and flat sugar prices, it is important that you be as efficient as possible. You should take the time to attend the meeting in your area to hear the latest recommendations that could possibly help you. A lot of planning has gone into these meetings and it is hoped that you can attend. The schedule of these meetings follows.

January 21 1:00 p.m. Pointe Coupee/West Baton Rouge Parishes Scott Civic Center New Roads, LA **January 24** 2:00 p.m. Lafourche Parish Agriculture Fair Building Raceland, LA **January 24** 6:30 p.m. Ascension Parish Blum Center Donaldsonville, LA **January 25** 9:00 a.m. St. John Parish Parish Ag Building Edgard, LA **January 25** 2:00 p.m. St. James Parish Parish Courthouse Annex Vacherie, LA **January 26** 4:00 p.m. Assumption Parish Assumption High School Napoleonville, LA February 7 1:30 p.m. Vermilion Parish Parish Extension Office Abbeville, LA February 7 7:00 p.m. Iberia Parish Sugarcane Festival Building New Iberia, LA February 8 9:00 a.m. Iberville Parish St. Gabriel Research Station St. Gabriel, LA

(Continued on page 18)

THE SUGAR BULLETIN

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Bayou Tractor Co. Franklin, LA (318) 828-1332 Quality Equipment Co. Kaplan, LA (318) 643-2249

THE BATON ROUGE LINE By Tom and Linda Spradley

During the past month we had the opportunity to meet with the "Floor Leaders" for the sugar industry. Floor leaders are legislators who provide leadership in the support of the issues set forth by the industry, and leadership for the defeat of those issues that threaten its livelihood. Floor leaders also serve as our "eyes and ears," picking up word of matters that might be of interest to the industry.

Following is a list of our floor leaders. Please take a moment of your time to let these men and women know how much you appreciate the job they're doing for the League.

Senators

Mike Foster — Franklin Tom Greene — Livonia Craig Romero — New Iberia

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Representatives

Don Higginbotham — Lafayette Sydnie Mae Durand — Parks Audrey McCain — Plaquemine Roy Quezaire — Donaldsonville Warren Triche — Thibodaux

As the Legislative Session draws near, we will be in touch with these legislators to discuss our legislative program.

Additionally, we are organizing another component to make the League more effective in its legislative efforts grass roots. A grass roots program, or network, is designed to inform legislators about where you stand on a particular issue. For instance, when a critical bill is moving through the legislative process, we will contact you to call your legislators, or any other legislators whom you know, to tell them how you feel about an issue.

Grass roots is an extremely effective method of communications. A legislator who receives a call from one or more constituents is always eager to learn what they think about an issue, and is usually happy to vote along the lines suggested by people with a vested interest who vote in his or her district. Legislators value this contact with voters, and in many cases, after hearing from a certain constituent a number of times, will initiate the call to determine how you feel on certain issues if he is unsure how sentiment runs in his district.

Participation in the grass roots program is voluntary — but we need your participation to make it effective. Charlie Melancon will send out questionnaires at the beginning of the new year to assist us in setting up the grass roots program. Please complete the form — we look forward to a successful grass roots and legislative program.

Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

REVISED EMISSIONS REPORTING RULE (AQ74)

The November 20, 1993 Louisiana Register contains revised and expanded rules for reporting emissions from pollution sources, including sugar mills. The new rules address expanded reporting requirements imposed by the 1990 Federal Clean Air Act Amendments, especially those intended for areas that have not met Federal Ambient Air Quality Standards, such as the Baton Rouge and vicinity "non-attainment" area for ozone.

The revised rule (AQ74) is not a great deal different than the previous rule, but is explained in much greater detail. Its effect will be felt mostly by smaller mills that have not previously been asked to submit annual reports on the amount of emission of each parameter of pollutant emissions. The larger mills have been submitting similar reports for several years.

The revised regulation covers four types of emission inventories.

- (1) Annual Emissions Statement (AES): This is a statement for each stationary source of the total amounts of criteria pollutants emitted during the previous calendar year. For sugar mills, this includes particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC).
- (2) Statewide Annual Emissions Inventory Update (AEIU): This report is required if there is a five percent or greater increase

or reduction in total annual emissions of individual pollutants.

- (3) Ozone Non-Attainment Area Statement: Mills located in the Baton Rouge non-attainment area, which includes Ascension. Iberville, Pointe Coupee and Livingston parishes, would be affected by this reporting requirements. However, the requirement is intended for reporting emissions during the "ozone season" (late spring and summer), and not the fall months when sugar mills operate. It is most likely that mills will be excused from the reporting requirement.
- (4) Special Inventories: This is a "catch all" rule that merely restates an existing rule that emission inventories, such as an updated Emissions Inventory Questionnaire (EIQ), can be requested at any time for submittal within 60 days.

Annual emissions statements will be required from all mills in the Baton Rouge non-attainment area that emit 10 tons per year of VOC of 25 tons per year of NO_x. Although boiler design and operating conditions affect the actual amounts of emission, rule-of-thumb emission factors indicate mills in the non-attainment area burning the bagasse from 30,000 or more tons of sugar cane would be affected.

(Continued on page 23)



To: All Sugarcane Farmers

La Cane is a sugar cane equipment company formed in January of 1987, by two lifelong employees of Thomson Machinery, the oldest sugarcane equipment manufacturer ever.

La Cane is now owned & operated by Jlm Collinson, President, Danny Morvant, Vice President and Controller, and Ken Caillouet, Vice President in charge of engineering.

La Cane has stood through many trials and circumstances, ranging from developing and perfecting sugarcane equipment to unfair tactics from competition. Obviously, La Cane has not only held its ground, but gained strength in the process.

Since 1990 La Cane began to lead the way, by developing easier operating and more efficient harvesting equipment, while gaining more flexibility.

Our goal is very simple. We are working hard to produce the most profitable and beneficial tools available for the whole sugarcane industry.

After taking a look at the La Cane "Tiger" 2 Row Harvester and Loader work in the field, you will agree that nothing else will do the job that it does. You will also see that both the farmers and the mills will greatly benefit because of them. If you leave less scrap in the field and send less mud to the mill, you both win. It's just that simple.

Those of you who have purchased new equipment from La Cane, have said with more than just words, that you believe in us and believe in what we are doing. Your support has helped us to be the success that we are today.

Thank you for putting action behind your words by purchasing equipment designed and built by La Cane.

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IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

MOLASSES PURITY

As usual, the molasses exhaustion survey performed by the Audubon Sugar Institute shows a considerable range of performances by the mills. Some mills perform consistently well in producing molasses close to or below the target purity. The target purity is that which should be achieved for final molasses from a C-massecuite processed under optimum conditions. The actual value for this target is based on an empirical relationship between the (true or sucrose, rather than pol) purity of molasses achieved in the laboratory under controlled conditions, and the levels of reducing sugars and ash in the molasses. There are a variety of forms of the equations used for this purpose. but they all have the common feature of reducing the target purity as reducing sugars increase and increasing the target purity as the ash level increases.

The particular factors that are controlled in the laboratory are massecuite purity, brix and crystal content, and the temperature / time profile used for cooling. Viscosity plays an important role in limiting the mobility and crystallization rate, and therefore imposes limits on the brix and temperature that can be achieved in practice.

This year we are seeing a fairly decent correlation between the apparent purity of the molasses (using the ABC reagent), and the true purity based on high performance chromatography. The true purity is usually between eight and ten points higher than the apparent purity. Since the target true purity is usually in the range 40 to 43, this would require an apparent purity value in the low 30s or below to be reasonably well exhausted.

The target purity is that which should be achieved in a well run operation which does not have serious equipment limitations. If, for example, the factory has inadequate crystallizer capacity, it is unreasonable to expect the level of molasses exhaustion achieved by a factory with high crystallizer capacity. Beyond considerations of equipment capacity and performance, each aspect of the process, starting with the Bmolasses purity and the purity and quality of the grain, needs to be studied carefully if losses in molasses are to be reduced to a minimum. In most mills, the only analytical data obtained for low grade massecuites are the massecuite brix and purity (usually when discharged from the pan), and the final molasses purity (from the low grade centrifugals). Several process stages are involved in good exhaustion, and it is most desirable to measure the performance of each stage. For example, if the purity difference between the massecuite and mother liquor (molasses) is too small when the massecuite is discharged from the pan, there is little possibility that the crystallizers will compensate. To adequately understand the purity profile in the system, it is necessary to recover molasses for analysis from the when discharged from the pan, through

(Continued on page 23)



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or years, Roundup® has been the recognized standard for broad spectrum weed and grass control. However, Roundup was considered to be potentially damaging to sugarcane during in-crop applications. But that was before the invention of the hooded sprayer. APPROVED IN LOUISIANA With the advent of the hooded sprayer, Roundup has now been approved in Louisiana for in-crop application of Roundup in sugarcane to eliminate weeds

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For a video about the new applications and benefits of Roundup and the hooded sprayer for in-crop sugarcane cultivation, please contact Raul Gamez with Monsanto at (504) 769-3475.

To order a new hooded sprayer system designed specifically for sugarcane, contact Cajun Systems at 1-800-264-1061. Or for more information about the Sugarcane Hooded Sprayer, call the manufacturer, Custom Ag Products at 1-800-225-8082.

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WASHINGTON UPDATE

Buntrock also serves as Executive Vice President and as a board member of USDA's Commodity Credit Corporation.

Crop Production Report

The production of sugarcane for sugar and seed is forecast at 30.5 million tons, 1 percent more than last year and

(Continued from page 5)

virtually unchanged from the November 1 forecast. The increase is due to larger crops in all States except Hawaii. Weather conditions in Hawaii varied throughout sugar producing areas. This year's production of sugarcane for sugar, at 29.0 million tons is virtually unchanged from a year ago.

(Continued on page 15)



WASHINGTON UPDATE

(Continued from page 14)

CROP SUMMARY: YIELD PER ACRE AND PRODUCTION, UNITED STATES, 1992 AND FORECASTED DECEMBER 1, 1993

CROP AND UNIT		YIELD PER ACRE		PRODUCTION		
		1992	1993	1992	Nov. 1, 1993	Dec. 1, 1993
					— 1,000 —	
All Cotton	¹ Bale	699	597	16,218.5	16,296.5	16,283.5
Upland	¹ Bale	693	592	15,710.2	15,904.5	15,896.5
Amer-Pima	¹ Bale	938	968	508.3	392.0	387.0
Cottonseed	Ton			6,230.1	6,327.2	6,317.2
Dry Edible Beans	1 2 Cwt	1,478	1,366	22,615	22,385	21,745
Burley Tobacco	Lb.	2,163	2,152	719,552	639,170	640,550
Sugarcane for						
Sugar and Seed	Lb.	32.8	32.2	30,363	30,430	30,524
Pecans ³	Lb.			166,000	378,500	351,000
Citrus Fruits 4				1992-93	1993-94	1993-94
Oranges ³	Ton			10,988	10,274	10,312

(Domestic Units)

(Metric Units)

CROP	YIELD PER	YIELD PER HECTARE		PRODUCTION		
	1992	1993	1992	Nov. 1, 1993	Dec. 1, 1993	
		I	Metric Tons	6		
All Cotton	0.78	0.67	3,531,160	3,548,150	3,545,320	
Upland	0.78	0.66	3,420,490	3,462,800	3,461,060	
Amer-Pima	1.05	1.08	110,670	85,350	84,260	
Cottonseed			5,651,850	5,739,940	5,730,870	
Dry Edible Beans ²	1.66	1.53	1,025,800	1,015,370	986,340	
Burley Tobacco Sugarcane for	2.42	2.41	326,380	289,920	290,550	
Sugar and Seed	73.57	72.16	27,544,850	27,605,630	27,690,910	
Pecans ³			75,300	171,680	159,210	
Citrus Fruits 4			1992-93	1993-94	1993-94	
Oranges ³			9,968,150	9,320,420	9,354,890	

¹ Yield in pounds.

² 1992 revised.

³ November estimate carried forward from October 1.

⁴ Season begins with the bloom of the first year shown and ends with the completion of harvest the following year.

(Continued on page 16)

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WASHINGTON UPDATE

USDA Releases Sweetener Market Data Report For September 1993

The U.S. Department of Agriculture's Commodity Credit Corporation released its Sweetener Market Data report for September 1993. Report totals, in short tons (2,000 pounds), include:

- September 1, 1993 beginning sugar stocks 1,829,834
- U.S. beet sugar production for September 1993 - 239,332
- U.S. cane sugar production for September 1993 - 78,117
- Deliveries for September 1993

 858,929, including deliveries for domestic human consumption — 837,830
- Sept. 30, 1993, ending sugar stocks — 1,598,597
 December 15, 1993



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(Continued from page 15)

GATT Update

On December 7, 1993, the United States and the European Community reached an agreement on agriculture in Geneva, Switzerland. The big dispute holding up the talks for the last three years has been a quarrel between the United States and the European Community over farm subsidies. Last year, the United States and the Europeans agreed to reduce the tonnage of subsidized grain exports by 21 percent, and to limit other farm subsidies. But France, Europe's biggest agricultural exporter, wanted the subsidy provision renegotiated. The United States agreed to allow the Europeans to subsidize more grain exports during the first years of the agreed six years, and less over the latter years than previously planned. In exchange, the Europeans agreed to convert some of their quotas on farm imports into lower tariffs.

One final agreement on GATT is reached, the next three months of 1994 will be spent reviewing the agreement and checking for accuracy and conformity among all of the participants. After this process is completed, President Clinton can submit the entire agreement to Congress for its approval under the fast track process on or before April, 1994.



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FARM NOTES (Continued from page 6)

January 31	3:00 p.m
St. Martin Parish	
Parish Extension Office	
Breaux Bridge, LA	
February 10	10:00 a.m
Avoyelles/Rapides/St. Land	łry Parishe
Bunkie Bank Meeting Ro	oom
Bunkie, LA	
February 10	4:00 p.m
St. Mary Parish	
Baldwin Church Hall	
Baldwin, LA	

AMERICAN SOCIETY OF SUGAR CANE TECHNOLOGISTS

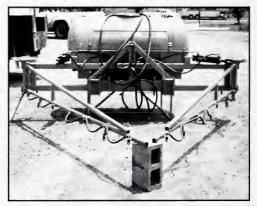
The annual meeting of the Louisiana Division of the ASSCT will be held February 3 and 4, 1994 at the Baton Rouge Hilton Hotel. The first session will be held on Thursday morning, with agricultural papers presented on Thursday afternoon. A social hour and banquet will follow on Thursday evening. The manufacturing section will occur on Friday morning. This meeting is an excellent opportunity for you to meet the scientists who work for you, and are trying to help make you better growers and processors. It is your opportunity to hear the latest research results and discuss these findings with the scientists and fellow industry members. All industry members are encouraged to attend and participate. Further information concerning the meeting can be obtained from Wade Faw at the Louisiana Cooperative Extension Service in Baton Rouge at (504) 388-4141.

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UP FRONT WITH THE LEAGUE

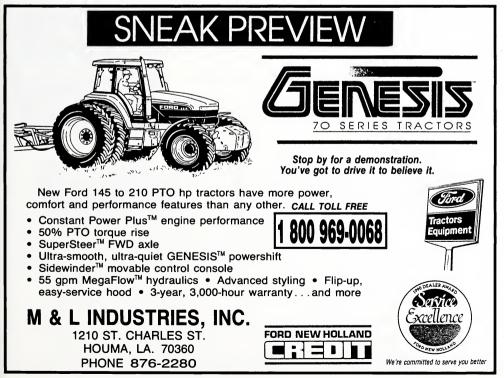
sympathy or empathy on the part of these regulators and complainants to continue to look the other way. No one said that this is a panacea, or that all your problems will be solved, but if this industry does not take it upon itself to look towards the future and try to proactively respond to forseeable concerns before they become reality, we will find ourselves in an uncompromising position at some future time; and that my friend is not a comfortable position for you or this industry to be placed.

The Wright Brothers did not fly on their first attempt, and no one would have ever imagined supersonic jet planes just several decades later. The world is a changing place, and as a part of that world, we must be making those changes that help us to compete far into the next century. To that end, it is

(Continued from page 4)

inherant upon us to experiment. It has been said by those much smarter than me, and much longer ago than I can remember, "that it is better to have tried and failed than to not have tried at all." Everyone need not agree; but, everyone should keep an open mind. This is your industry! We all want it to be the best it can be. Maintaining the status quo *will not* make us better!





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FOR SALE: 8' Corrugated Copper Steel Culverts; 12' sections can be joined for longer lengths. Call Frank Martin Farms at (318) 836-5583 or (318) 836-5873.

FOR SALE: Cameco S30 Single-row Cane Cutter, Hydraulic Shredder, Topper Sunstrain Cat Engine; 4430 Hi-Clearance JD Tractor; Cameco 2-wheel Drive Hydrostat Field Loader; 4 Field Carts; H & H Transloader on Ford Truck; 3-row Cane Cutter with Off Bar Attachments. Call Frankie Farms after 7:00 p.m. at (318) 346-4646 or (318) 346-7093.

FOR SALE: 2—JD 4020 Top Top Console; JD Hi-Crop Cab Straight Shift; 2—Int'l 1066 Hi-Crop; 806 Hi-Crop; 1486 Dual Low-Crop. **Will Take Trade.** Call Grady Dugas at (318) 845-4774.

FOR SALE: 6000 gal. Stainless Steel Vertical Tank (8' wide x 20' high). Cone bottom with Legs, 2'' port, 16'' lid. Would make excellent fuel tank. Call George at 3-D Chemicals 1-800-732-3787.

FOR SALE: 1984 John Deere 690B Excavator, Excellent Condition — U.C. Good, Cab with Air & Heat, Pilot Controls with Grapple Turn, 2 Buckets, 7400 Hours. Call (318) 364-4615 or Felix Gonsoulin at (318) 364-7570.

FOR SALE: 1975 J & L L16 Self Propelled Loader — \$12,000. Call Roger Kahao at (504) 344-9845.

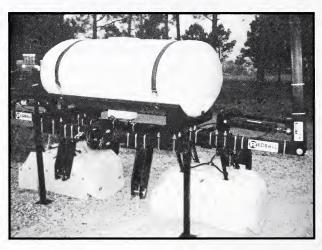
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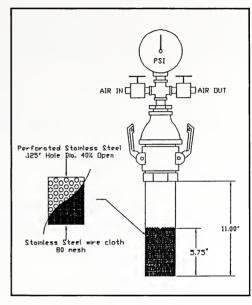
(Continued from page 12)

IN THE FACTORY

the cooling cycle, after reheating and on feeding to the centrifugals. This is usually done with a pressure filter (nutsch bomb) or a centrifuge (cyclone). We have used various nutsch bombs in several studies, but they are usually too cumbersome to use and clean, especially when extended measurements with many samples are involved. Also, they produce only a limited amount of sample, a potential problem if the standard analytical procedures are used, as they should be for comparison with the routine data.

To overcome these problems, we have developed a new design of nutsch bomb which is simple to use and produces plenty of molasses for analysis. The design is shown in the drawing. The bomb is made up of two parts; the top which is fixed to a wall or pillar and contains the air supply, valves and pressure gauges. The bottom section contains the screen in its lower part, and the same diameter pipe in its upper part. The pipe is 3 inch stainless steel. The relative lengths of screen and pipe should be sufficient to allow for the contraction of the material as the molasses is expelled, and so avoid air being blown through the screen and loss of pressure. The screen used is 80 mesh stainless steel which is held in place by perforated steel pipe. The bottom and top sections are connected using 3 inch, quick-connect fittings. Several sample (bottom) sections can be used with a single top section, and the bottom section can be used to collect samples. The sample sections are easily cleaned by placing them in a bucket of hot water.

This design is a significant improvement over present designs and we recommend that the mills use such devices in evaluating their low grade operations. For example, a recent sample of composite final molasses from a mill with two centrifugal stations was found to have a purity slightly above target. Samples taken with the nutsch bomb from the feed to the centrifugals were 2.6 and 4.0 points below target.



ENVIRONMENTAL PERSPECTIVE

(Continued from page 9)

Sugar mills located in Parishes adjoining the non-attainment area (St. James, Assumption, and St. Martin parishes) that emit 50 tons per year of VOC would be required to submit an AES. Mills burning the bagasse from processing approximately 150,000 tons per year or more of cane would be affected.

Mills, elsewhere in Louisiana, emitting 100 tons per year or more of any pollutant, would also be affected; however, it is possible that mills with good emission control systems and burning bagasse from less than 300,000 tons of cane per year, could be exempted from the AES reporting requirement.

Happy New Year!

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The Sugar Bulletin

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U.S.A.

ANNOUNCING THE SEVENTY-FIRST ANNUAL MEETING OF THE

AMERICAN SUGAR CANE LEAGUE OF THE

U.S.A., INC.

WEDNESDAY, FEBRUARY 16, 1994 — 9:30 A.M. THIBODAUX CIVIC CENTER

310 N. CANAL BLVD., THIBODAUX, LOUISIANA

REGISTRATION BEGINS AT 9:00 A.M.

At this Meeting there will be an election of Members of the Board of Directors to serve during the ensuing year.

A luncheon honoring Senator John Breaux will be held at noon.

Immediately following the luncheon, the American Sugar Cane League Foundation will hold a meeting to elect a Board of Directors.

> All Members of the League will Please Consider This as an Official Notice to Attend

Vol. 72 — No. 5

FEBRUARY 1, 1994

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

Charles J. Melancon, Editor/President and General Manager Charles A. Richard, Ph.D., Vice-President and Director of Research Windell R. Jackson, Senior Agronomist Herman Waguespack, Jr., Agronomist John Constant, Business Manager Nannette B. Nickens, Secretary Paul G. Borron, III, Legal Counsel

Washington Representative: Wallace and Edwards, Inc. 1150 Connecticut Avenue, N.W. Suite 507 Washington, D.C. 20036 Phone: (202) 331-4331 Baton Rouge Representative: Spradley and Spradley 7612 Picardy, Suite L Baton Rouge, LA 70808 Phone: (504) 766-1359

Editorial and Executive Office: 206 E. Bayou Rd., Thibodaux, LA. 70301 Phone: (504) 448-3707

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Charles A. Richard, Ph.D., Thibodaux, LA Vice-President and Director of Research

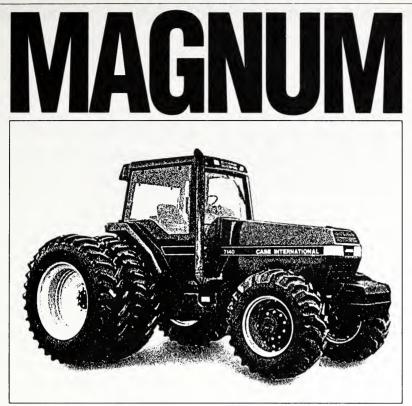
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UP FRONT WITH THE LEAGUE By Charles J. Melancon

The announcement of the Annual meeting of the American Sugar Cane League is on the cover of this issue of The Sugar Bulletin. You will note the meeting will be on Wednesday, February 16, 1994, at the Thibodaux Civic Center in Thibodaux, Louisiana. Registration will begin at 9:00 a.m.

It is important that all members make a sincere effort to attend this meeting. The League is not the staff's organization, nor is it the officers' and directors' organization. It is your organization. You pay the dues that enable it to function on your behalf.

The Chairmen of each of the League's three major committees will report to the membership. These are: Ramon Billeaud for the Finance Committee, Charles Thibaut for the Legislative Committee, and Pat Cancienne for the Research Committee. Also, Chairman of the Board, Bert Beyt, will present his report. The election of the League's Board of Directors for 1994 will be conducted.

The members of the League's Board of Directors meet on a monthly basis. Any member of the League is invited to attend the Board meetings. The Board members want input from the general membership. The annual meeting is an excellent opportunity to be informed of the activities of the League and to express your thoughts and ideas.

A luncheon will immediately follow the meeting to honor Senator John Breaux for his efforts on behalf of sugar during the NAFTA ratification debate of 1993.

The Board of Directors and Staff of the League urge your attendance and solicit your input at the 1994 Annual meeting.

Report of the Nominating Committee. The following were nominated by the committee to serve on the American Sugar Cane League Board of Directors beginning February 16, 1994.

GROWER MEMBERS

Henry Adolph Bryan Allain J.G. Beaud. Jr. Lawrence Dugas John Evans John Gay Ronald Gonsoulin Warren Harang, III Jackie Judice Robert "Bobby" Judice, Jr. A.J. "Brother" LeBourgeois, Jr. Michael G. Melancon Jerome "Jerry" McKee Leonard Oncale Howard Robichaux **Raphael Rodriguez** Frank Sotile **Roland** Talbot Carlton Townsend **Daniel Viator**

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WASHINGTON UPDATE WITH DON WALLACE

GATT Update

On December 15, 1993, Peter Sutherland, director general of the General Agreement on Tariffs and Trade (GATT) declared that the Uruguay Round had concluded. President Clinton notified Congress that he would sign the trade accord on April 15, 1994, scheduled to be held in Morocco.

Reductions in agricultural trade barriers is one of the major accomplishments of the Uruguay Round. The basic provisions of the agriculture agreement include domestic price supports, market access, and export subsidies. Domestic price supports must be reduced by an overall average of 20% over six years from the average levels during 1986 -1988. Domestic sugar price supports will be unaffected, since the U.S. has reduced other commodity supports enough to cover the overall 20% cut. The United States is replacing the current tariff rate quota for sugar with a tariff equivalent equal to 17 cents/lb., which will be reduced to 16 cents/lb. in 1995 and reduced to 14.45 cents/lb. in equal annual installments by the year 2000. The Section 22 fee of 1 cent/lb. for refined sugar and syrups will also be reduced by the minimally required 15% over 6 years. The U.S. is establishing a minimum tariff rate quota of 1,139,195 mt for raw sugar effective in the first years of the agreement. Export subsidies must be reduced over six years by 36% in outlays and 21% in quantities using average levels in 1991-1992 as the starting point for reductions. This was a major concession to France as subsidies during the 1991-1992 base period were a higher base than the original offer of averaging subsidies during 1986-1990 period.

However, GATT negotiations are

still ongoing with Canada regarding the shipping of sugar, sugar-containing products, and blends into the U.S. The sugar industry wrote Secretary of Agriculture Mike Espy, President Clinton, and U.S. Trade Ambassador Mickey Kantor to voice our concerns with Canada's continuous shipping of sugar and sugar products into the U.S. The following letter was sent to Secretary Espy:

APT

Dear Mr. Secretary:

Congratulations on the outstanding job you and your team did representing United States agricultural interests during the recently concluded Uruguay Round of the General Agreement on Tariffs and Trade. While this industry had, from the beginning of these negotiations, supported the goal of total and complete elimination of all tariff and non-tariff barriers to international trade in sugar on a **global** basis, we recognize this was a Herculean task. Progress toward that end was made, however, and we are grateful, not only for what was achieved, but by the fact that, under your leadership, we were kept fully involved and informed in the process.

Work remains to be done, of course, particularly involving Canada and that country's growing propensity for shipping sugar, sugar-containing products and blends into the US. By monitoring US Customs Service data, we have found imports of flavored sugar from Canada, for instance, have increased in just four years from a mere 20 metric tons in FY 1990, to nearly 54,000 metric tons in FY 1993. Iced tea mix imports have grown from zero to 40,793 metric tons in the same period. These products are almost

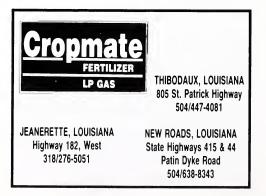
(Continued on page 26)

FARM NOTES By Dr. Charley Richard

FOLLOW THE RECOMMENDATIONS — RECORDKEEPING

Each spring this article normally deals with the importance of following the recommendations concerning field drainage, fertilization, and early weed control. This year is no different with regards to the importance of these practices; however, I will not spend as much time writing about them. It should be recognized by all growers that they need to follow the information provided to them by the Louisiana Cooperative Extension Service with regards to proper fertilization and weed control. This information is based on many years of research and should provide growers with the techniques that will allow them to be most efficient in cane production.

Drainage is a factor generally recognized by all growers as essential to good yields. However, many growers did not have the time or resources to clean out drains during the last harvest season, and as a result there are many fields which have too much water remaining in the wheel furrows at this time. These fields need to be drained as quickly as possible since research shows that yields will be drastically reduced from standing water in the field during the winter months.



RECORDKEEPING

The subject of recordkeeping is also an area of cane farm management that is normally discussed in this article at this time of the year. However, unlike other management practices, many growers do not do a good job of collecting and reporting important data. If this industry is to compete in the global economy it now finds itself in with NAFTA and GATT, then growers must perform better in the area of keeping field and financial records. At a recent meeting of the League's Long Range Planning Committee, it was noted that a great many growers cannot generate an income and expense statement throughout the year. Many growers must go to their CPA to find out where they stand financially. If growers are to make intelligent decisions concerning production practices then they must be able to know, at any one time, where they stand financially in their business. Computers can help but are not essential. If you are considering going into computers to handle your recordkeeping or financial affairs, the League has a Computer User's Group that can help you with available software and a list of industry members that use comparable programs. A meeting of this group is being planned in the near future. Please call the League Office if you are interested. Herman Waguespack, Jr. and Windell Jackson are heading up the activities of this group and are eager to assist growers in finding solutions to their computer problems.

Another aspect of recordkeeping is

(Continued on page 30)

NEW JOHN DEERE HI-CROP TRACTORS

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Choose the 92-hp John Deere 7200 Hi-Crop or the 100-hp 7400. Either way, you get up to 34 percent torque rise for continuous power and pull...the efficient power to keep you moving in soft, bedded soils and over levees.

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7

THE BATON ROUGE LINE

By Tom and Linda Spradley

The following is a short questionnaire that will help to strengthen our "grass roots" and make us more effective in working with the Legislature. You would be amazed at how seriously (honest) legislators treat letters and phone calls from their constituents. Please take a few minutes to complete it, and return it to us.

> Spradley & Spradley 7612 Picardy Ave., Ste. L Baton Rouge, LA 70808

GRASS ROOTS QUESTIONNAIRE

NAME	HOME PHONE
HOME ADDRESS	
BUSINESS	BUSINESS PHONE
BUSINESS ADDRESS	
BUSINESS FAX	
STATE REPRESENTAT	VE*
HOW WELL DO YOU K	JOW HIM/HER?
VERY WELL	SPEAK WITH HIM/HER OCCASIONALLY NOT WELL
WOULD YOU BE WILLI OR TWO LEGISLATIVE	NG TO CALL/MEET WITH HIM/HER REGARDING ONE ISSUES EACH YEAR?
YES	NO
STATE SENATOR*	
HOW WELL DO YOU K	NOW HIM/HER?
VERY WELL	SPEAK WITH HIM/HER OCCASIONALLY NOT WELL
WOULD YOU BE WILLI OR TWO LEGISLATIVE	NG TO CALL/MEET WITH HIM/HER REGARDING ONE ISSUES EACH YEAR?
YES	NO
	g, you might not be certain of your State Representative or Senator. If this is

* Because of redistricting, you might not be certain of your State Representative or Senator. If this is the case, call whom you think is your Representative or Senator; that office should be able to tell you for sure. Another office to check with would be your local Registrar of Voters.

Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

ENVIRONMENTAL UPDATE

The Federal Water Pollution Control Act of 1972 established a requirement that specific water quality standards be established for "waters of the United States," which includes lakes, streams and embayments that are not entirely contained within private premises. The law allows every state to classify waterbodies according to uses, such as for water supply, fish propagation, and for receiving treated wastewater discharges. Specific water quality standards that accommodate these designated uses must then be established. The U.S. Environmental Protection Agency (EPA) must approve all such surface water quality standards (stream standards) before such can be enforceable.

Stream standards are very important because they are the enabling basis upon which wastewater discharge (NPDES) permits are issued. NPDES permits allow municipalities and industries, such as sugar mills, to discharge treated wastewaters, but only to streams capable of receiving the waters without causing a violation of a quality standard or interfering with any of the designated uses for which the stream is classified.

The December 20, 1993, State Register contains a Notice of Intent by the Louisiana Department of Environmental Quality (LDEQ) to review and revise Louisiana's Water Quality Standards. Federal law requires LDEQ to do this at least once every three years. The rule revisions proposed for consideration are mostly "housekeeping" changes, but one of the proposed changes is of considerable interest.

From the beginning, "stream standards" have been a difficult problem for the cane sugar industry. The standards for many streams in the coastal area, where much of the cane sugar industry is located, have quality standards for minimum dissolved oxygen content established that are not, and cannot be met. Sugar mills located near these streams are sometimes unable to get NPDES permits to discharge treated wastewater even though these treated wastewaters may in better condition from the oxygen/oxygen demand standpoint than the nearby stream in its "natural" state, because it is unlawful to put "pollutants" into a stream that does not meet designated stream standards.

The "catch 22" situation described above was not caused by LDEQ, who must now enforce the stream standards, or by its predecessor agencies. The problem originated when Louisiana's initial "Stream Standards" were proposed by (Continued on page 31)



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FOR SALE: IH 1466 Low Clearance, David Brown 1200, 2-IH Hydro 100, Cameco Loader (SP 2000) w/backhoe, single row — Broussard Harvester, 3208 Catepiller Engine, 2—480 IH Disc Harrow, 2—Mechanical Planters, Prentice Transloader (F700 Ford), Cane Trailer, Various Field Equipment. Call Joseph Boudreaux Farms, Inc. at (504) 447-7685.

FOR SALE: 8' Corrugated Copper Steel Culverts; 12' sections can be joined for longer lengths. Call Frank Martin Farms at (318) 836-5583 or (318) 836-5873.

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FOR SALE: 1984 John Deere 690B Excavator, Excellent Condition — U.C. Good, Cab with Air & Heat, Pilot Controls with Grapple Turn, 2 Buckets, 7400 Hours. Call (318) 364-4615 or Felix Gonsoulin at (318) 364-7570.

FOR SALE: JD 690A Back Hoe in Good Shape — has clean out bucket, small digging bucket, and set up to load cane — Asking \$10,000. 2 — Thompson 3-Row Cultivators with Off-Bar Rigs — Asking \$3,500 for one and \$3,000 for the other. Call Frank Pearce at (504) 625-3157.

FOR SALE: 2 — Davis Cane Carts in Good Condition. Homemade 8' wide Planter Wagon without Running Gear — in Good Condition. Call (318) 367-5435.

FOR SALE: 1975 J & L L16 Self Propelled Loader — \$8,000. Call (504) 344-9845.

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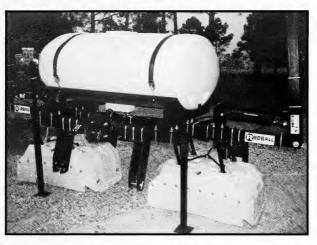
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CANE QUALITY

The proceedings of the most recent congress of the South African Sugar Technologists Association has some quite interesting material for Louisiana cane producers and processors. In the Presidential Address to the Association, comments were made on both the direction of research in sugarcane technology and the need for improving their cane quality, especially in terms of freshness of cane as a consequence of reduced cut to delivery time.

Technology development is looked upon as a long term process, often with significant delay between the research program and the benefits that might accrue. This is more reason for the research program to be clearly focused. Increasing competition between sugar producers and the upgrading of the sugar industry in formerly less developed areas make the emphasis upon quality of operation more important than ever. In the address, productivity was defined in terms of output in relation to input. Quality of product (output), as well as quantity, is becoming increasingly important as customers are requiring sugar of particularly high standards. Therefore, cane quality becomes critically important, since high levels of trash lead to highly colored juice and sugar. The suggestion is made that the juice color be incorporated into the cane payment system.

One of the topics under active investigation in Louisiana is the development of improved cane harvesting and delivery systems. The intent is to develop a system which does not bring in dirt and trash with the cane, thus avoiding burning and washing. In any system the delay between cutting and milling should be as short as possible. Small tests can be useful as guidelines, but factory scale trials are much more valuable. One of the problems of this type of work is summarized in a paper as follows - "Because a major effort is needed to carry out these trials, not many are done and the resultant body of information is not very extensive". As we move towards changing our harvesting system, we must ensure that sufficient factory scale trials are done to give an adequate picture of the problems that might arise.

In South Africa ethanol formation is used as an indicator of sugar loss and was found to be two to three times higher in burned than unburned cane. In the case under study, a large amount of cane had been burned and the mill had to process this cane over more than two weeks. The apparent purity decreased after the fire from an initial value of 83 to below 70 in fourteen days. The main mechanism for sugar loss was inversion. The mass loss due to evaporation was fairly consistent at 0.5% per day.

The South African industry has endured two droughts during the last decade. The conditions were much more severe than those experienced in Louisiana in 1993 when some cane areas were without significant rain for several months. Their industry has been able to

(Continued on page 32)

Sugarcane Outfield Variety Trials In Louisiana During 1992

D.D. Garrison¹, H. L. Waguespack², W.R. Jackson², K.L. Quebedeaux³ and H.P. Schexnayder⁴

INTRODUCTION

Outfield variety testing is the final stage of a 12-year selection sequence of the Louisiana Sugarcane Variety Program. In 1992, five unreleased varieties in the plant-cane, three in the firststubble, and two in the second-stubble crop were compared to seven commercial varieties. Agronomic characteristics of these varieties were evaluated at 12 locations cooperatively by the American Sugar Cane League of the U.S.A., Inc., the United States Department of Agriculture's Agricultural Research Service, and the Louisiana State University Agricultural Center's, Louisiana Agricultural Experiment Station. Field plots were located on soil types representative of the Louisiana sugarcane belt.

1992 GROWING SEASON

The industry faced two consecutive weather-related, poor crops in 1990 and 1991. In 1992 weather conditions had been favorable and average to above average yields were expected until August 26, when Hurricane Andrew hit the Louisiana coast in the vicinity of Morgan City with 140 miles per hour winds (5). As Hurricane Andrew made its way through Louisiana, many of the parishes with the largest acreage of sugarcane were in its path. High winds

associated with Hurricane Andrew caused lodging, leaf shredding, and stalk breakage. Fields in the Bayou Teche area, where the 'eye' of the storm passed, experienced up to 75% broken stalks. Planting was delayed due to excessive rain that continued after the storm into September; however, dry weather late in September and October allowed most of the growers to complete their planting. Still planting was made difficult at best, by the broken and crooked seed cane resulting from the storm. The delay in planting also forced most mills to delay their opening. Sugar recoveries in 1992 were higher than expected but this increase did not offset the reduction in tonnage associated with Hurricane Andrew. The stalk damage from Hurricane Andrew was further compounded by excessive rains in November and December. As a result, the 1992 harvest can best be characterized with below average yields, difficult, and expensive (6).

EXPERIMENTAL PROCEDURES

Tests were hand planted in a randomized, complete-block design. Three replications of each variety were planted in plots 32 ft. long and 18 ft. (3 rows) wide. Practices recommended for commercial production of sugarcane in

(Continued on page 14)

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Sugarcane Outfield Variety Trials (Continued from page 13)

Louisiana were used at all test locations. Periodic inspections of the variety plots were made and important agronomic observations were recorded. Observations on harvestability were recorded at locations that had lodged cane at harvest.

Sugarcane stalks from each plot were harvested and piled by machine. The piled stalks in each plot were weighed unburned with a tractormounted scale to determine the gross vield of cane per acre (1). Fifteen stalks were randomly selected from each plot, weighed and crushed once through a three-roller mill. Net tons of cane per acre, pounds of sugar per ton of cane (TRS), pounds of sugar per acre, mean stalk weight and number of millable stalks per acre were calculated based on previously reported procedures (3, 6). Data were subjected to analyses of variance. Means for each of the yield components were separated by Waller-Duncan's Bayesian k-ratio t-test (k-ratio = 100:1, roughly corresponding to 0.05 P) which calculated minimum significant differences (MSD).

RESULTS

The location, soil type, and crop of each outfield test and dates of planting and harvest are presented in Table 1. Yield data for all locations within a soil type and crop are reported in Tables 2



through 7. Varieties are listed in chronological order (by year of assignment). In the comparison of varietal performance, CP 70-321 is used as the standard or control variety. This variety occupied 47% of the 1992 sugarcane acreage in Louisiana (2).

Light Textured Soil

Plant-cane crop: (Table 2)

In sugar per acre, LCP 85-384 out yielded all of the varieties on light soil. Yields of sugar per acre were also higher than CP 70-321 on light soil for CP 79-318, HoCP 85-845, LCP 86-454 and LCP 87-491.

In cane per acre, yields of CP 74-383, LCP 85-384, HoCP 85-845, LCP 86-454 and LCP 87-491 were significantly higher than CP 70-321.

In sugar per ton of cane, yields of CP 65-357 and LCP 85-384 were significantly higher, and CP 74-383, LHo 83-153, HoCP 85-845, LCP 87-17 and LCP 87-491 were significantly lower than CP 70-321.

In stalk weight, CP 79-318, and LCP 86-454 were significantly heavier than CP 70-321, and LHo 83-153, LCP 85-384 and LCP 87-491 were lighter. The stalk weight of LCP 86-454 was significantly heavier than all varieties evaluated.

In millable stalk population, CP 74-383, LHo 83-153, LCP 85-384, HoCP 85-845, LCP 87-17 and LCP 87-491 were significantly higher than CP 70-321. Of these varieties, LCP 85-384 and LCP 87-491 had the highest millable stalk populations.

First-stubble crop: (Table 3)

In sugar per acre, LCP 85-384 out yielded all varieties evaluated on light soil.

In cane per acre, yields of CP 74-383 and LCP 85-384 were significantly

(Continued on page 15)

THE SUGAR BULLETIN

Sugarcane Planting Recommendations (Continued from page 14)

higher than CP 70-321. LCP 85-384 out yielded all varieties except CP 74-383 and HoCP 85-845.

In sugar per ton of cane, yields of CP 74-383, CP 79-318, LHo 83-153 and HoCP 85-845 were significantly lower than CP 70-321.

In stalk weight, LCP 86-454 again produced significantly heavier stalks than CP 70-321, and LCP 82-89, LCP 85-384 and HoCP 85-845 produced stalks which were lighter than CP 70-321.

In millable stalk population, CP 74-383, LCP 85-384 and HoCP 85-845 were significantly higher than CP 70-321 with the stalk population being higher than all other varieties in plots planted to LCP 85-384.

Second-stubble crop: (Table 4)

In sugar per acre, yields of CP

79-318 and LCP 85-384 were significantly higher than CP 70-321 on light soil.

In cane per acre, yields of CP 79-318, LHo 83-153, LCP 85-384 and HoCP 85-845 were significantly higher than CP 70-321.

In sugar per ton of cane, yields of CP 65-357 and LCP 85-384 were significantly higher than CP 70-321.

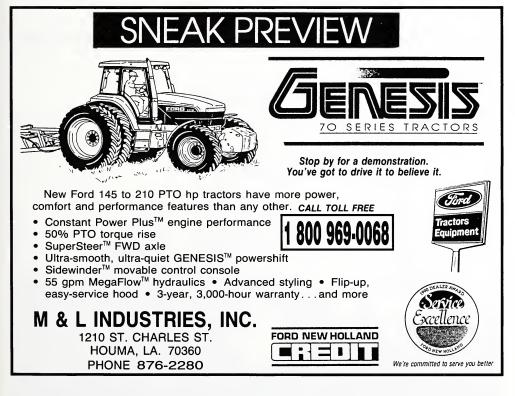
In stalk weight, no varieties were significantly different than CP 70-321.

In millable stalk population, CP 79-318, LHo 83-153, LCP 85-384 and HoCP 85-845 were significantly higher than CP 70-321.

Heavy Textured Soil Plant-cane crop: (Table 5)

In yield of sugar per acre and cane per acre, no varieties produced yields which were significantly different from CP 70-321 on heavy textured soil.

(Continued on page 18)



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Sugarcane Outfield Variety Trials (Continued from page 15)

In sugar per ton of cane, yields of CP 65-357 was significantly higher than CP 70-321, but CP 74-383, LHo 83-153, LCP 87-17 and LCP 87-491 were lower. Only CP 79-318, and LCP 85-384 produced sugar per ton of cane yields which approached CP 65-357.

In stalk weight, CP 79-318 and LCP 86-454 were significantly heavier than CP 70-321, but LHo 83-153, LCP 85-384 and LCP 87-491 were lighter.

In millable stalk population, LHo 83-153, LCP 85-384, HoCP 85-845 and LCP 87-491 were significantly higher than CP 70-321, but LCP 86-454 was significantly lower.

First-stubble crop: (Table 6)

In yields of sugar per acre and cane per acre and in millable stalk production, none of the varieties were significantly different from CP 70-321. However, millable stalk populations for LCP 85-384 were significantly higher than plots planted to CP 65-357, CP 79-318, and LCP 86-454.

In sugar per ton of cane, only CP 79-318 significantly out yielded CP 70-321.

In stalk weight, CP 79-318 and LCP 86-454 were significantly heavier than CP 70-321, but LCP 85-384 was significantly lighter. Of the varieties evaluated, LCP 86-454 produced the heaviest stalks.

Second-stubble crop: (Table 7)

In sugar per acre and sugar per ton of cane yields, none of the varieties significantly differed from CP 70-321 on heavy soil. However, sugar per acre yields of LCP 85-384 were higher than CP 65-357, CP 74-383, and CP 79-318.

In cane per acre, yields of CP 65-357 were significantly lower than CP 70-321. LCP 85-384 out yielded CP 65-357, CP 74-383, and CP 79-318.

In stalk weight, CP 65-357, LHo 83-153 and LCP 85-384 produced stalks which were significantly lighter than CP 70-321.

In millable stalk population, LHo 83-153 and LCP 85-384 were significantly higher than CP 70-321 and all varieties evaluated except HoCP 85-845.

DISCUSSION

Unreleased varieties: Yield data were obtained for LCP 85-384 and HoCP 85-845 in plant-cane, first-stubble and second-stubble crops. LCP 85-384 on light soils consistently yielded better than CP 70-321 in sugar per acre and tons of cane per acre in plant-cane, firststubble and second-stubble crops. Sugar per ton of cane yields were better than CP 70-321 in plant-cane and secondstubble crops on light soil only. Although the stalk weight of LCP 85-384 was lighter in plant-cane, firststubble and second-stubble crops on light and heavy textured soils than CP 70-321, millable stalk populations were always higher. Observations on harvestability indicate that LCP 85-384 may be brittle when lodged.

HoCP 85-845 in plant-cane crops on light soils yielded better than CP 70-321 in sugar per acre and tons of cane per acre. In second-stubble crops on light soils, HoCP 85-845 yielded better than CP 70-321 in tons of cane per acre. In plant-cane, first- and second-stubble crops on light soils and in plant-cane crops on heavy soils HoCP 85-845 yielded better than CP 70-321 in millable stalks per acre.

Plant-cane and first-stubble data were obtained for LCP 86-454. This variety yielded higher than CP 70-321

(Continued on page 19)

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Sugarcane Outfield Variety Trials (Con

(Continued from page 18)

in stalk weights in plant-cane and firststubble crops on both light and heavy soils. LCP 86-454 had higher sugar per acre and tons of cane per acre yields than CP 70-321 only in the plant-cane crop on light soils where net cane yields of CP 70-321 were atypically low.

Yield data were obtained in plantcane for LCP 87-17 and LCP 87-491. In plant-cane tests, LCP 87-17 yielded better than CP 70-321 in recorded millable stalks on light soils but lower in sugar per ton of cane on light and heavy soils. More millable stalks per acre, lower sugar per ton of cane and lower stalk weights than CP 70-321 were recorded on light and heavy soils for LCP 87-491.

Commercial varieties: The combined analyses of the test locations by soil and by crop showed that the sugar per acre yields for CP 65-357, CP 74-383, LCP 82-89 and LHo 83-153 were equal to CP 70-321 on both light and heavy soils in all crops. In the tests where CP 72-370 was included it yielded equal to CP 70-321 in sugar per acre. The sugar per acre yields for CP 79-318 were higher than CP 70-321 in plant-cane and second-stubble crops on light soil.

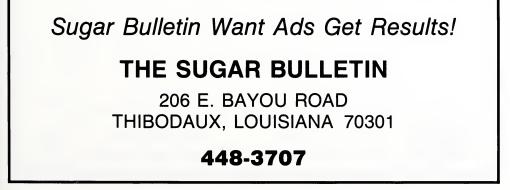
ACKNOWLEDGMENTS

The authors would like to express their appreciation to the growers and their personnel for the assistance in planting and harvesting these tests.

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(See Tables 1 & 2, page 21)



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(Continued from page 19)

	Plan	t-Cane	First-	stubble	Second-stubble		
Location	Planted '91	Harvested '92	Planted '90	Harvested '92	Planted '89	Harvested '92	
Light Soil							
Bon Secour ¹	10/03	11/19	8/31	11/04	9/23	11/04	
Cinclare 1	9/30	11/13	10/31		9/22		
Frank Pearce ¹	9/18	12/01	9/26	11/18	10/19		
Georgia 2	10/08	12/04	9/14	11/05	10/10	10/15	
Glenwood ²	9/26	11/23					
Lanaux 1	10/10	12/03	10/25	11/06			
Ronald Hebert ³	9/27	12/03	10/04	11/09	9/25	11/9	
Heavy Soil							
Allain ³	9/30	11/16	9/05	11/16			
Evan Hall 1	10/03	12/02	8/27	12/02	10/10	9/27	
Magnolia ²	10/07	11/29	10/01	11/29			
McLeod 2	10/08	12/07					
Oaklawn 3	9/17	12/17	9/06	10/25	9/27	11/10	

Table 1. Dates of planting and harvest for 11 outfield locations during 1992 in the plantcane, first-stubble and second stubble crops.

² = Bayou Lafourche area

³ = Bayou Teche area

Stalk Millable Sugar per Yield per Sugar per weight stalks Variety acre acre ton (lb.) (tons) (lb.) (lb.) (no.) CP 65-357 2.44 6575 23.2 283 +19098 CP 70-321 6051 22.0 274 2.46 17937 CP 72-370 6520 24.0 273 2.46 19523 CP 74-383 25.3 +2.38 21279 +6463 255 -CP 79-318 6813+ 24.6 278 2.58 +19040 19184 LCP 82-89 6509 23.5 278 2.45 LHo 83-153 24.3 22342 +6418 262 --2.18 -LCP 85-384 7893+ 27.5 +2.25 -24531+ 287 +HoCP 85-845 262 -2.45 6855 +26.2 +21439 +LCP 86-454 25.7 +271 3.06 +6941+ 16839

TABLE 2. Combined plant-cane response on light soil during 1992 (7 test locations).

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

24.2

25.8 +

2.8

252 -

262-

8

(SEE TABLES 3 & 4, page 22)

2.41

0.12

1.97 -

LCP 87-17

LCP 87 491

MSD

6091

6781 +

701

20012 +

26263 +

2043

÷74

- 7-

(Continued from page 21)

Variety	Sugar per	Yield per	Sugar per	Stalk	Millable
	acre	acre	ton	weight	stalks
	(lb.)	(tons)	(lb.)	(lb.)	(no.)
CP 65-357	6672	23.8	279	2.06	23051
CP 70-321	7147	25.2	283	2.17	23321
CP 72-370	7337	26.3	277	2.14	24629
CP 74-383	7590	28.9 +	260 –	2.09	27716 +
CP 79-318	7376	26.8	275 –	2.17	24809
LCP 82-89	6331	22.8	276	1.96 –	23574
LHo 83-153	6983	26.1	267	2.06	25523
LCP 85-384	8799 +	30.5 +	288	1.86 –	32944 +
HoCP 85-845	7501	27.6	271	1.95 –	28298 +
LCP 86-454	7474	26.8	278	2.58 +	20863
MSD	918	3.2	8	0.13	2958

TABLE 3. Combined first-stubble response on light soil during 1992 (6 test locations).

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

Variety	Sugar per acre	Yield per acre	Sugar per ton	Stalk weight	Millable stalks
	(lb.)	(tons)	(lb.)	(lb.)	(no.)
CP 65-357	6100	21.1	287 +	1.85	22792
CP 70-321	5982	22.0	271	1.97	22436
CP 74-383	6488	25.2	257	1.92	26524
CP 79-318	7582 +	26.8	282	1.91	28336 +
LCP 82-89	6091	21.8	277	1.81	24065
LHo 83-153	7331	26.9+	272	1.82	29626 +
LCP 85-384	7813 +	27.3+	286 +	1.72	31977 +
oCP 85-845	7112	26.7 +	267	1.82	29645 +
MSD	1574	4.4	14	0.29	4533

TABLE 4. Combined second-stubble response on light soil during 1992 (3 test locations).

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

(SEE TABLES 5 & 6, page 23)

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(Continued from page 22)

Variety	Sugar per acre	Yield per acre	Sugar per ton	Stalk weight	Millable stalks
	(lb.)	(tons)	(lb.)	(lb.)	(no.)
CP 65-357	6627	22.9	290 +	2.50	18508
CP 70-321	6130	22.0	279	2.44	18117
CP 72-370	6465	23.1	280	2.54	18422
CP 74-383	5630	21.1	266 –	2.32	18164
CP 79-318	6489	22.7	285	2.67 +	17127
LCP 82-89	6032	21.8	277	2.41	18592
LHo 83-153	6574	24.4	270	2.19	22640 +
LCP 85-384	6729	23.5	287	2.08 -	23113
HoCP 85-845	6840	24.9	275	2.30	21841 +
LCP 86-454	5801	20.9	278	2.80	14996
LCP 87-17	6159	23.8	259 –	2.44	19954
LCP 87-491	6416	24.1	266	1.89 –	25960 +
MSD	1130	4.3	9	0.19	2894

TABLE 5. Combined plant-cane response on heavy soil during 1992 (5 test locations).

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

TABLE 6. Combined first-stubble response on heavy soil during 1992 (4 test locations).

Variety	Sugar per acre	Yield per acre	Sugar per ton	Stalk weight	Millable stalks
	(lb.)	(tons)	(lb.)	(lb.)	(no.)
CP 65-357	5275	17.8	295	1.76	20530
CP 70-321	5303	18.5	288	1.65	22744
CP 72-370	5337	18.5	288	1.76	21170
CP 74-383	5019	18.2	277	1.59	23231
CP 79-318	5303	17.6	303 +	1.86+	19288
LCP 82-89	5982	20.3	295	1.65	24818
LHo 83-153	5232	18.6	282	1.53	24718
LCP 85-384	6042	20.9	293	1.47 –	28380
HoCP 85-845	5488	19.3	286	1.62	23970
LCP 86-454	5990	20.2	297	2.06 +	19609
MSD	NS	NS	12	0.16	5685

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

(SEE TABLE 7, page 24)

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Variety	Sugar per acre	Yield per acre	Sugar per ton	Stalk weight	Millable stalks
	(lb.)	(tons)	(lb.)	(lb.)	(no.)
CP 65-357	3947	13.9 –	284	1.41 –	19689
CP 70-321	4811	17.0	284	1.58	21701
CP 72-370	4750	17.1	277	1.52	22555
CP 74-383	4340	16.2	267	1.59	20378
CP 79-318	4374	15.4	285	1.64	19235
LCP 82-89	4533	16.7	274	1.56	21631
LHo 83-153	5010	18.7	269	1.29 –	29319+
LCP 85-384	5548	19.6	283	1.30 –	30754 +
HoCP 85-845	5181	18.9	274	1.56	24308
MSD	973	2.9	23	0.15	5622

TABLE 7. Combined second-stubble response on heavy soil during 1992 (2 test locations).

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at 0.05 P, respectively.

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Sterling Sugars Board of Directors Announces New C.E.O.

The Board of Directors of Sterling Sugars, Inc., Franklin, LA, has announced the retirement of Fred Y. Clark as its President and Chief Executive Officer. Mr. Clark has been with Sterling Sugars since 1977 and is retiring to pursue other activities that will include a teaching position at the university level. Under his direction, Sterling Sugars now averages 9,000 tons of sugar cane processed per day.

Mr. Craig Callier has been selected to serve as Vice President and Executive Officer of the Corporation. He has had extensive experience in the sugar industry.

In other business, Mr. M.J. Foster, Jr. of Franklin has been elected to serve as President of the Corporation. Mr. Foster is the owner and president of Bayou Sale Contractors, Inc. and has served as a Louisiana State Senator since 1987. He has had previous sugar cane farming experience and is a past-president of the St. Mary Parish Farm Bureau.

Will Legendre, who also has extensive experience in the sugar industry, has been named Director of Factory Operations.

The Board of Directors has stated its commitment to continued growth of the Sterling raw sugar factory; striving to make it the most modern, reliable and convenient factory for all the sugar cane farmers in the area. The Board also reconfirmed its pledge to serve the farmers of the area and the communities of the sugar cane industry.



WASHINGTON UPDATE

entirely sugar. In fact, the sugar content of just these two items approximated 90,000 metric tons in the products imported from Canada during FY 1993.

During the last quota period (FY 1992) for which data are complete, Canada's share of US sugar imports — had that country been subject to quota limitation — would have been 16,775 short tons, raw value. Instead, that nation shipped 40,576 short tons, raw value, of sugar into the US. And, while nearly nine months remain in the current (FYs 1993 and 1994) quota period, Canada's sugar exports to the US already exceed 130 percent of its historic market share.

We know you are fully aware of the impact of these imports on your Department's ability to administer the domestic sugar program equitably. You demonstrated this clearly when you forwarded your recommendation for emergency action, under Section 22 of the Agricultural Adjustment Act of 1933, to the White House last June.

In the months leading up to the end of the Uruguay Round negotiations, US sugar producers agreed to bind current import access to this country with the understanding some remedy would be found to the surge of



(Continued from page 5)

Canadian exports across our border. In light of this fact, we sincerely urge you to stand firm in the action you took in Geneva, as illustrated by the country list submitted to the GATT on December 15, 1993. Any compromise in this regard would impede our ability to generate support for Congressional approval of the final Agreement.

We will also express these concerns to the President and to US Trade Ambassador Kantor.

Sincerely,

The United States Sugar Industry

The President is expected to send the trade agreement and implementing legislation to Congress sometime before the signing ceremony in Morocco. Congress (House and Senate) has 90 legislative days to pass the legislation once the President sends it to Capitol Hill.

Crop Production Summary of 1993

The production of sugarcane for sugar and seed in 1993 was estimated at 30.5 million tons which was up 1 percent from 1991 and 1992. The area harvested totaled 947,900 acres, 2 percent above 1992 and 6 percent above 1991. The yield per acre averaged 32.2 tons which was 0.6 tons less than 1992.

Florida growers indicated that the 1993 season was favorable. Florida reported that they have harvested 50 percent of their crop as of January 1994. In Louisiana, the crop started off well. However, dry weather during August and early September hindered growth. Warm, wet weather during the harvest

(Continued on page 27)

THE SUGAR BULLETIN

WASHINGTON UPDATE

reduced sucrose content to below average.

The production of raw sugar from the 1993 sugarcane and sugarbeet crops has been estimated at 7.54 million tons, raw value, down 3 percent from the 1992 total. The decrease reflects a 9 percent drop in sugarbeet production.

Output of beet sugar has been estimated at 4.10 million tons raw value, down 6 percent from the quantity produced from the previous beet crop. Output of refined sugar per ton of sugarbeets averaged 290 pounds, up 9 pounds from a year ago.

Raw cane sugar from the mainland crop was estimated at 2.76 million tons, up 2 percent from a year ago. Hawaii's raw cane sugar output, at 676,000 tons, was up 4 percent from the previous year. Yield of refined sugar per ton of sugarcane for sugar for the U.S. averaged 221 pounds, 3 pounds more than 1992. (SEE CROP SUMMARY, PAGES 28 & 29)

Wetlands Regulation

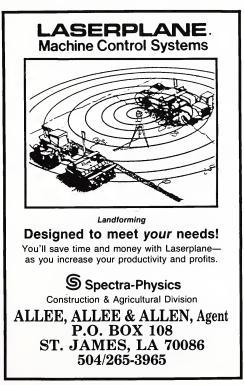
Implementing one of the administration's wetlands policy recommendations, four federal agencies announced on January 6, 1994, that USDA's Soil Conservation Service will be the lead agency dealing with wetlands on agricultural lands. SCS now has jurisdiction over wetlands determinations under Section 404 of the Clean Water Act that the U.S. Corps of Engineers and Environmental Protection Agency had administered. Meanwhile, USDA said farmers in 20 states can sign land into the Welands Reserve Program between Feb. 28 and March 11, 1994. With WRP funded this fiscal year at \$66.7 million, USDA said 75,000 acres could be enrolled. The conservation program was last funded in (Continued from page 26)

fiscal year 1992 with a 50,000 acre enrollment limitation.

Clinton appoints farmer as White House Advisor

President Clinton has appointed Arkansas farmer, Marion Berry, as the special assistant to the president for agricultural and rural affairs. Berry is a rice, soybean, and corn grower on a 1700 acre farm in Gillette, Arkansas. He worked closely with Clinton on conservation issues when he was governor. Berry replaces fellow Arkansan, Miles Goggans, former aide to Senator David Pryor (D-AR) who quit the position in a few months to return to Arkansas. Unlike Goggins, Berry has no Washington experience.

(SEE CROP SUMMARY, PAGES 28 & 29)



B	BY STATE, AND UNITED STATES, 1991-1993						
	ARE	A HARVES	TED		YIELD ¹		
STATE	1991	1992	1993	1991	1992	1993	
	1	,000 ACRE	s	TONS			
For Sugar							
FL	428.0	426.0	433.0	34.9	33.2	33.0	
HI	67.4	61.7	58.5	86.9	88.0	89.0	
LA TX	321.0 33.2	345.0 37.7	360.0 43.5	22.1 32.4	23.2	23.0	
US	849.6	870.4	43.5 895.0	32.4 34.1	34.2 33.2	30.6 32.5	
For Seed	040.0	0/0.4	000.0	04.1	00.2	02.0	
FL	15.0 17.0		17.0	34.9	33.2	33.0	
HI	6.6	6.2	5.0	30.9	31.0	29.2	
LA	24.0	30.0	30.0 0.9	22.1	23.2	23.0	
ТХ	1.7	1.7 1.6		20.0	23.8	23.3	
US	47.3	54.8	52.9	27.3	27.2	26.8	
For Sugar & Seed							
FL	443.0	443.0	450.0	34.9	33.2	33.0	
HI	74.0	67.9	63.5	81.9	82.8	84.3	
LA TX	345.0 34.9	375.0 39.3	390.0 44.4	22.1 31.8	23.2 33.8	23.0 30.5	
US	896.9	925.2	947.9	31.8	32.8	30.5	
			Produ	uction 1			
	19	91	19	92	1993		
For Sugar			1,000	TONS			
FL	14,	937	14,	143	14,	289	
н		857	5,	430		207	
LA		090		010		280	
ТХ		076		290		331	
US	28,	960	28,	873	29,	107	
For Seed							
FL		524		564		561	
HI LA		204 530		192 696		146 690	
TX		34		38		21	
US	1,	292	1,-	490	1,-	418	
For Sugar & Seed	,						
FL	15,	461	14,	707	14,	850	
HI		061	5,	622	5,	353	
LA		620		706		970	
ТХ		110		328		352	
US	30,	252	30,363		30,525		

SUGARCANE: AREA HARVESTED, YIELD, AND PRODUCTION, BY STATE, AND UNITED STATES, 1991-1993

¹ NET TONS.

(SEE CHART, page 29)

THE SUGAR BULLETIN

WASHINGTON UPDATE (Continued from page 28)

SUGAR AND MOLASSES: PRODUCTION BY TYPE, SOURCE, STATE, AND UNITED STATES. 1991-93

COUDCE	SUGAR					M	MOLASSES 1		
SOURCE AND	R/	W VAL	JE	REF	INED BA	SIS			J ·
STATE	1991	1992	1993 ²	1991	1992	1993 ²	1991	1992	1993 ²
			1,000	TONS			1,00	0 GALL	ONS
Sugar- cane FL LA TX	1,833 762 111	1,710 876 135	1,742 897 124	1,713 712 104	1,598 819 126	1,628 838 116	101.441 42,485 7,743	93,686 43,895 9,377	96,400 52,864 9,376
Main- land Total	2,706	2,721	2,763	2,529	2,543	2,582	151.669	146,958	158,640
HI3	724	652	676	677	609	632	35,960	34,710	35,400
US	3,430	3,373	3,439	3,206	3,152	3,214	187,629	181,668	194,040
Sugar- beets US	3,729	4,386	4,102	3,485	4,099	3,833	218,956	178,459	N/A
Cane & Beets US	7,159	7,759	7,541	6,691	7,251	7,047	406,585	360,127	N/A

¹ Blackstrap (80 degree brix) includes high-test molasses from frozen cane and edible molasses. LA edible molasses totaled 1,825 thousand gallons in 1991 and 1,460 thousand gallons in 1992. 1993 will be available in June 1993.

² Preliminary.

³ 85 degree brix for HI molasses.

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FARM NOTES (Continued from page 6)

the reporting of these records to the proper officials. Of course, growers are responsible for their own reporting of financial records to the IRS for tax purposes and to their financial lenders for their information. PCA has conducted a survey of their clients, and others who wished to participate, for several years. This information has been valuable in providing cost of production and return on investment information across the industry.

Of all the areas of recordkeeping, the industry has done a particularly poor job in the reporting of individual farm acreage, especially seed cane acreage. With the possibility of acreage controls, there seems to be more growers interested in reporting more accurately. However, there is a lack of leadership by any one agency to be responsible for the whole set of data. ASCS collects the total acreage data from growers. However, some parishes do a better job than others in having a high percentage of its growers report their acreage. The unfortunate thing is that even though ASCS voluntarily collects seed cane acreage, they are not required to; therefore, official seed cane reports must come from CRS (Crop Reporting Service). The Cooperative Extension Service also collects acreage information but is not considered the official source by the federal government. The League attempts to get acreage information from each of these sources but has great difficulty in getting numbers that compare to each other from the difficult source. One thing is certain, one single organization needs to accept the responsibility to

(Continued on page 33)



ENVIRONMENTAL PERSPECTIVES (Continued from page 9)

the Louisiana Stream Control Commission, circa 1973. An abundance of water quality data collected by the agency demonstrated that "unpolluted" streams in the coastal marsh area had dissolved oxygen content of 3.0 ppm (or less) during warm weather months, and the native aquatic species were thriving in these waters. The low oxygen content in comparison to fast moving upland streams is caused by abundant nutrients fed to these streams naturally from the surrounding marshlands (naturally dystrophic waters). The Commission therefore proposed that the dissolved oxygen standard for the naturally dystrophic streams be 3.0 ppm, including such streams that were then experiencing less than 3.0 ppm dissolved oxvgen content because of receiving man-made pollutants from municipalities and/or industries. However, EPA refused to approve.

Much effort was expended by Stream Control Commission staff in explaining the situation. The EPA sent fisheries experts (from the New England area as I recall) to advise the Commission that native fish species could not survive and propagate in coastal waters with less than 5.0 ppm dissolved oxygen. and to deliver an ultimatum that either the dissolved oxygen standard would be set at 5.0 or EPA would not approve any stream standards for the state. Therefore no NPDES permits could be issued in Louisiana. The Commission complied, but fortunately did not tell our native fish species they could not live there anymore.

The problem with obtaining NPDES discharge permits for sugar mills that are compatible with unattainable stream oxygen standards persists. LDEQ has been helpful in finding alternatives, but the treatment of pumping and impoundment storage facilities needed to overcome the stream standards problem is very expensive, and not 100 percent reliable.

The newly proposed amendment of the Louisiana Water Quality Criteria (stream standards) will not solve the long standing problem, but is a step in the right direction. The revision proposes that ". . . some waterbodies, because of natural water quality or physical limitations, may qualify for an exceptional use classification" on an individual, case-by-case basis. This provision would seem to allow for some limited effluent discharge to dystrophic coastal streams where ambient water quality will not be adversely affected, even though the oxygen standard cannot possibly be achieved. It remains to be seen whether EPA will approve the proposed change, and then, whether "qualifying" for an "exceptional use classification" can translate to reasonable effluent limitations in NPDES permits to discharge to these waterbodies.



THE SUGAR BULLETIN 448-3707

IN THE FACTORY

(Continued from page 12)

accumulate some interesting information on the effects of drought on cane quality and factory operation. They have performed a statistical analysis of the data, but it must be borne in mind that the capabilities of the factories vary and bottlenecks and problems occur in different areas. Many effects interact and are difficult to isolate and measure. The data required for this work is only available if the factories perform accurate analysis and keep good records.

Cane throughput was lower in some cases but there was a general increase in non-sucrose throughput. For the drought period there was a 20% increase in tons of non-sucrose in mixed juice per hour. The trend towards higher mill extraction continued and was unaffected by the drought. The moisture level in bagasse was somewhat higher than normal but there were no problems with the boilers and an increase in bagasse dust was observed. These factors are explained by a difference in fiber characteristics of the cane with an increase in pith relative to hard fiber. The pith fraction would be expected to dry and burn faster in the boilers.

Most drought related problems occurred with the pans, crystallizers and centrifugals. The reasons given are the increase in non-sucrose loading and the gumminess of the massecuites. The analysis for gums is not specific and measures all alcohol precipitable organic material. For the drought period, the level of gums was ten times that of starch — similar data to that for some Louisiana molasses at the end of the 1992 crop from a mill which had

(Continued on page 33)



IN THE FACTORY

(Continued from page 32)

gummy massecuites. However, dextran levels were not high and in some cases lower than normal. There is a tendency to associate all the gummy massecuite problems with dextran but this is not justified.

Boiling house recovery decreased by about 3% over the drought period and losses in molasses increased. The undetermined losses increased; but this was not considered to be statistically significant. Much more false grain was noted in c-massecuities during the drought periods. It is very difficult to compare molasses viscosities due to the high influence of brix on the measured viscosity, but there was a general increase in viscosity under drought conditions. Target purity differences were higher, in part expected from the presence of false grain and the higher viscosities.

Sodium hydrosulfite was used to reduce both viscosity and color. Its use resulted in no measurable change in purity, reducing sugar/ash ratio, fructose/glucose ratio and pH. The reduction in viscosity was in the range 30-50% while the use of dextranase reduced viscosity by only about 25%. It should be noted that sodium hydrosulfite is a source of sulfur dioxide, and from the refiners standpoint, there are some disadvantages to its use. The raw sugar quality remained good - the whole sugar color was higher than normal but there was decreased color in affined sugar (as compared with previous drought conditions). This is ascribed to the use of hydrosulfite and the increased burning of cane.

Fouling of centrifugal screens on the continuous B- and C-massecuites was noted. This has been observed at some mills in Louisiana. Their analyses showed a high level of calcium relative to sulfate or silica and tests for aconitate were inconclusive.

We have no control over the weather

but we do not expect a severe drought in Louisiana. Even so, there are some interesting lessons for us when the cane industry in another area has problems and reports them candidly and in detail.

FARM NOTES

(Continued from page 30)

undertake this effort and get it done. Without accurate acreage records, this industry cannot track its progress. Measuring progress is essential if we are to compete under the rules outlined by the North American Free Trade Agreement, the Generalized Agreement on Tariffs and Trade, Marketing Allotments, and whatever other requirements might come with the 1995 Farm Bill.

Individual growers must also do a better job of keeping field maps of where thay have planted each variety. With the problems that the currently available varieties have, it is necessary that growers have several varieties grown on their farm acreage. Because it is so difficult to distinguish among some of the varieties, and because of the extreme importance in keeping heat treated or Kleentek seed cane separate from mill cane, a good planting map is necessary. Again, while computers are not necessary (a tablet is sufficient), they can be helpful and there are some fairly easy to use programs that can be purchased to help growers with this task. The League's Computer User's Group has this information and can provide help with map making as well as all other aspects of recordkeeping.

This industry cannot claim to be truly efficient until RECORDS prove it to be.

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 72 – No. 6

MARCH, 1994

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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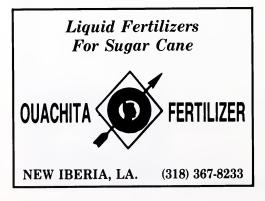
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UP FRONT WITH THE LEAGUE By Charles J. Melancon

I recently had the opportunity to spend several days with fifty plus sugar people touring the Florida sugar industry. Most of the people on this bus tour were farmers, but some were mill employees and service industry employees from the Louisiana sugar industry. More importantly, most were people that I previously had not had the opportunity to speak with, visit, or see on a daily basis up until then in my job as general manager of the League. Let me start by saying that the trip was very enjoyable and educational for me, in that it was my first chance to visit the Florida industry. That is, of course, with the exception of my father taking my younger sister and me on vacation to the sugar co-op in Belle Glade when I was fifteen. Needless to say, that in itself is another story for another day.

Some people may think that a bus trip is very mundane. However, this particular bus trip started off with a lot of excitement because of one fellow with a very vivid imagination. For the better part of the first day, and portions of every day of the trip thereafter, Eddie Chiasson kept one of the two buses and its occupants entertained. My only regret was that I was not able to return to Thibodaux with Eddie to see if his



wife would fulfill the promises she had made to him over the phone nightly, while he was away in Florida. Suffice to say, Eddie really suckered me in on that joke!

Several days later, after returning from the Florida trip, the general membership meeting of the League was held. This meeting is an opportunity for all of the people in the industry who faithfully pay their dues to come and listen to the committee reports and ask the questions about the League's activities over the past year. To participate! We had a nice crowd for the morning meeting and the luncheon honoring Senator John Breaux. However, I would hope that in subsequent years that the majority of you, the working cane farmers of the Louisiana sugar industry, would take the morning off from your operations and participate in this annual event. I want to reiterate, "participate," not just attend. As mentioned in my address to the gathering, my door is always open to any and all of you who have suggestions or thoughts on how to make this industry better for everyone.

The first week of March will mark the first of a series of meetings of the sugarcane states, its refiners, and subsequently some cane and beet sector meetings for the purpose of beginning negotiations for the 1995 Farm Bill. For those of you who are not aware, Jackie Theriot of Louisiana Sugar Cooperative has been appointed Chairman of the National Sugar Advisory Committee of the American Farm Bureau Federation. This is a very distinct honor that has been bestowed on one of our own in the Louisiana industry. I can understand full well why Mr. Kleckner, President of the American Farm Bureau, chose

(Continued on page 14)

WASHINGTON UPDATE WITH DON WALLACE

GATT Update

President Clinton is expected to urge Congress to approve the agreement reached several weeks ago in the Uruguay Round of the multilateral trade talks by this summer. Legislation is already being drafted and a "mock mark-up" by Congress is expected to begin in late March or early April. Implementation of the agreement will then begin by July 1, 1995, but not sooner than January 1, 1995, depending on agreement at the April ministerial. Negotiators are scheduled to return to Geneva in March to finalize country schedules along with tariff schedules. On the ministerial level, a meeting in Marrakesh, Morocco, is scheduled for April 15 for the official signing of the agreement. The controversy continues as to how to handle the projected \$11 billion dollar loss to the U.S. Treasury as a result of tariff reductions which will occur over the next six years. Congress will have to consider different options before the agreement can be passed. There has been discussion over electing a budget waiver or whether to offset the loss to the Treasurey on reductions of other existing expenditures. Negotiations with Canada are ongoing regardand sugar-containing ing sugar products.

President Clinton announces Budget for FY 1995

On February 7, President Clinton sent his \$1.52 trillion Federal budget to Congress, purportedly reducing the deficit to \$176 billion from \$235 billion this year. Last year's budget deal mandated limits on spending and set a fiveyear, \$500 billion anti-deficit package which Congress approved last summer. The package excluded any addition of broad-based tax increases. USDA's budget includes \$60.3 billion in outlays which is a decrease of \$4.6 billion. The decrease is a result of estimated savings largely from the price support program and the closing of more than 1,110 field offices and other administration savings due to reorganization. The savings from the price support program are estimates based primarily on weather-related shorter crops which, in USDA's opinion, will shore up prices, thereby lowering target price exposure to the Treasury. There is no change recommended in the budget to any of the price support programs. Reorganization estimates will save USDA more than \$2.4 billion over the next four years.

USDA Reorganization Continues

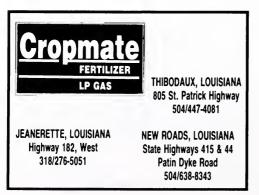
On Tuesday, February 8, the House Agriculture Subcommittee on Department of Operations and Nutrition held a mark up on and approved for full committee action, as amended, H.R. 3171, "The Department of Agriculture Reorganization Act". This legislation includes establishment of a new agency, the Farm Service Agency (FSA). FSA will have authority over conservation programs. FSA will also be in charge of other programs including: price and income support, crop insurance, farm credit and conservation cost-share programs in the one-stop service center. The agency will continue to cut back on personnel and emphasize early retirement through incentives. Expense cutbacks will continue both at headquarters and in field offices but with a greater emphasis on cuts at headquarters. A Senate reorganization bill is expected to be acted on soon. Hearings were held on the Senate bill in October, 1993.

(Continued on page 22)

FARM NOTES By Dr. Charley Richard

ADMINISTRATION PROPOSAL TO CLOSE USDA HOUMA STATION CROP REPORT — AUSTRALIA TRIP

The current Administration has recently released its budget recommendations for the coming fiscal year (October 1, 1994 to September 30, 1995). In the USDA portion of the national budget are numerous cuts to reduce facilities and personnel across the country. Among these cuts are the elimination of the budget for the USDA Station in Houma, Louisiana. This station is, of course, vital to the future of the Louisiana sugar industry and it is essential that these cuts be restored before the beginning of the budget year. The American Sugar Cane League has made a commitment to do everything it can to save the station in Houma. The staff has already initiated efforts to work with the Louisiana Congressional Delegation and others in an effort to stop what the USDA leadership in Washington has already announced. In addition to our local Congressmen and Senators, an effort is being made to solicit support from other sugar producing states to have their Congressional Delegations support the continuation of the Houma Station. Members of the industry will be solicited to help with calls to their suppliers and associates from other states to gather support from their Congressmen to



assist in this effort. The industry will be kept informed of details as we progress in efforts to save the station from the planned budget cuts.

For those who are unaware of the long term relationship that the League has had with the USDA, it was the Louisiana sugar industry that requested the Federal government to establish a permanent station in Louisiana during the 1920's. The American Sugar Cane League, working with Southdown Sugars, Inc., provided the land and the first buildings to house the experiment station at its current site in Houma. The League has also worked to shore up the Houma budget over the years so that scientists could help provide for the research needs of the industry. Currently, all varieties being grown throughout the entire Louisiana sugar industry have their roots in the USDA program. Weed, insect, and disease control practices currently being used were also partly or wholly developed at the USDA Station. New efforts in biotechnology are helping to keep the station in the forefront of new research.

The very effective, cooperative team of the USDA, LSU, and the League has made for a research program that has *NO* duplication of efforts. This is a very focused research program of numerous disciplines, consisting of a group of dedicated scientists that work to solve the problems of the sugar industry. The budget cuts, as they now stand, mean that by October 1, the scientists and other employees at the Houma facility no longer have a job at this location. As an industry member who has benefitted from the scientific efforts at the USDA *(Continued on page 16)*

THE SUGAR BULLETIN

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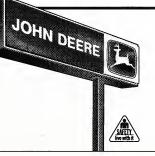
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THE BATON ROUGE LINE

By Tom and Linda Spradley

Special Session

A surprise session of the Legislature was hastily called to begin this week to appropriate money to pay sheriffs for keeping state prisoners. The problem is twofold: the legislature approved a budget with less per day to pay the sheriffs (\$18.25) than the amount we usually pay (\$21) but the companion bill to reduce the amount failed and the budget wasn't changed. They also predicted that the sheriffs would house only 4100 prisoners but the actual number held in parish prisons will be about 7000. That comes to a \$30 million mistake.

Will there be a surprise?

Some people are guessing that the session could be expanded to include some gaming legislation. The Governor has openly stated that he wished we had all of these gambling regulatory matters under one Super Board. The law says only matters specifically included in the official notice of a session can be addressed and this notice doesn't seem to have any slack in it; but we'll see.

Reapportionment

Looking for your Congressman? If you can't find him in Washington try Baton Rouge. Their future is being kicked around in the halls of the State Capitol.

State Legislators think a special session to reapportion is a sure thing, even before the U.S. Supreme Court rules on the Louisiana appeal. Cleo Field's "Z" shaped district is the problem.

Two basic rewrite plans are emerging. The first wants two primarily white districts in North Louisiana and a near The second plan would eliminate the top of the Z in Field's district and give that area back to Congressman McCreary. Richard Baker's district would come back from central Louisiana and would go East. But that pushes Republican Livingston into a district which would overlap State Senator Sammy Nunez's Senate district. Nunez, a Democrat who will have some major control over the reformation, probably doesn't want that.

These kinds of considerations are what had the legislature boxed in when they originally drew Field's Z shaped district.

This should be interesting to watch.

Grassroots Questionnaire

Please send in your Grassroots questionnaire that appeared in last month's Bulletin. Very few have been returned and knowledge of your contacts is vital in protecting Sugar from harmful legislation.

Need another questionnaire? Call us at 504-766-1359.



Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

HEAVY METALS

Heavy metal is not just a category of modern rock music, but also a subject near and dear to environmentalists. Heavy metals ordinarily refers to the high molecular weight (heavy) metallic elements found in nature, including arsenic, chromium, lead, and mercury. In high concentrations, these elements can be toxic to humans, animals, and plants.

Heavy metal intoxication is usually associated with occupational exposures such as those of certain smelter workers. alloy makers, ceramic workers, welders, etc. However, there have been a number of notorious incidents where nonworking segments of the population have been dangerously exposed. For instance, lead paint, which was commonly used before 1970, has been associated with health problems in children residing in poorly maintained dwellings having cracked and pealing lead-based paint on child-accessible surfaces. Mercuric wastes discharged by factories at Minimata, Japan caused much debilitating disease and death among those eating fish from nearby waters.

Heavy metals are ubiquitous in the natural environment. Ore grade deposits of heavy metals occur as a result of natural igneous activity, and these deposits are transported and widely dispersed by glacial, wind and water erosion. There are no known ore-grade deposits in Louisiana, but the alluvial soils of the Mississippi and Red River systems, on which Louisiana's sugar cane crop is grown, are naturally rich in heavy metals in comparison to average concentrations in surficial soils of the continental United States. The following table illustrates this point.

	Surficial Soils ¹ (Element Concentrations in ppm)		
Element	Mean, U.S.	South Louisiana Alluvium	
Arsenic	5.2	6.5	
Chromium	37.0	100.0+	
Lead	16.0	31.0	
Mercury	0.058	0.2 +	

¹ From Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270.

It is important to understand that the presence of heavy metals in our native soils is not a catastrophe. Trace amounts of heavy metals, including arsenic, are essential for human, animal, and plant metabolisms. Whether or not environmentalists and government regulators complain about "heavy metals" in residues and waters from sugar cane farms and mills, our main concern should be recovering or preventing the escape of these valuable soils that support life.

Much attention has recently been given to mercury in the local environmental news media. Much ado has been made over what some consider "high" concentrations of mercury in fish

(Continued on page 19)

IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

MORE THOUGHTS ON CLARIFICATION

In the November issue of the Sugar Bulletin I made some observations on the clarification process and its application in the factories. In this article I will return to this subject and add some further thoughts and speculations. I want to suggest some avenues for research based on trying to rationalize some of the observations made over the last few years. One of the problems in trying to carry this through is that concerted experimental plans are difficult since no two crops are the same and so many factors are involved.

We have relatively little information on the composition of new varieties (or old ones) for minor constituents which can have a significant impact on cane quality in terms of clarification characteristics. Some of these will have beneficial effects, and some adverse effects on the clarification process. Phosphate is obviously beneficial and starch detrimental, but other components may not be so clearly described. For example, organic acids, which form insoluble calcium and/or magnesium salts, may have adverse effects, depending upon process conditions.

These acids and their salts exert a major buffering effect in the juice and the solubility of their salts can display quite complex behavior. The dependence of the solubility on pH, temperature and brix are often unknown and the precipitation reaction may be slow enough that the reactions in the clarifier may be incomplete. If precipitation of these salts takes place in the evaporators or vacuum pans, then increased scaling problems and raw sugar quality problems may be expected. The latter is suspected at one of the Louisiana mills during the recent crop.

There is a tendency for factory problems to be blamed on the cane quality. However, some problems are due to poor factory operation and control and it is important that factory management recognize when this may be the case. Cane quality variations may be seasonal or varietal which cannot be controlled. It can also be due to poor harvesting and handling practices, which can be controlled. The higher starch and invert levels in Louisiana cane at the beginning of the crop are examples of the former. Stale cane containing dextran or with excessive acidity are examples of the latter. Although a single truck-load of badly deteriorated cane can upset a factory for a short period, in most cases when erratic factory performance is observed, it is due to internal problems. If, for example, sugar quality varies from strike to strike, this is almost certainly due to operational factors. All prior processing steps must be examined carefully for consistent operation. The mechanism, including the sampling and analytical procedures, must be in place for this to be done promptly. Most of the time and analytical procedures required are standard to factory chemical control, with the exception of turbidity measurements.

The measurement of turbidity is (Continued on page 24)

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UP FRONT WITH THE LEAGUE

Jackie to chair this all important committee. Having been at the League for approximately one year, I have found Jackie to be a fair and impartial individual who is very open minded and will hold the best interest of the entire sugar industry over any personal considerations. At a time such as this, with the potential challenges from environmentalists and consumers who do not understand (or do not wish to understand) agriculture or sugar, it is good to know that someone of Jackie's caliber is directly involved on that front.

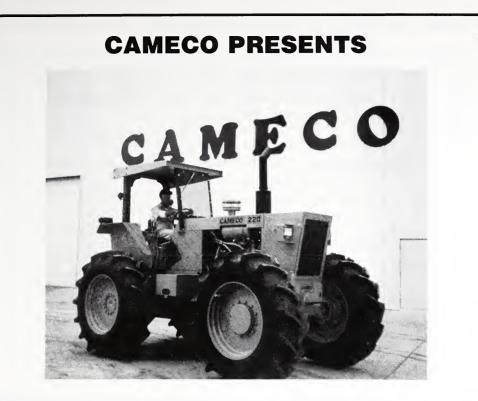
March 1 marks one year that I have been with the American Sugar Cane League as General Manager. Let me point out that this has not been, by any stretch of the imagination, a slow year in my life. As 1994 unfolds, I see ahead of me a year full of new challenges. With the support that you, the people of the

(Continued from page 4)

Louisiana sugarcane industry, have given me in the past year and the knowledge that you will be there to support me in the coming year, makes my daily efforts seem more worthwhile.

In closing, let me say that I am flattered by the acceptance shown to me by the sugar industry in my first year as general manager. However, I have also been much impressed by those same people. In particular, the officers and directors of the American Sugar Cane League. Whether we always agree with these leaders, and sometimes I haven't, I find them to be very knowledgeable of the industry and its politics. More importantly, very decisive! I have yet to wait around for anyone to make up their minds on an issue; and believe me, not only does it make things easier for me to move things along, but it's just plain nice!





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FARM NOTES (Continued from page 6)

Station, it is important that you, as a grower, processor, landlord, scientist, supplier, or other member take a role in helping to save the Houma Station from unfair cuts are being proposed in the USDA budget.

CROP REPORT

The 1993 crop was completed on January 1, 1994 when the Enterprise factory completed its grinding operations. Numerous records were set by several factories with regards to daily and weekly grinding capacities, as well as seasonal capacity.

The crop records for this past season have both good news and bad news in them. This past season some 9,240,000 tons of cane were ground by the 20 raw sugar factories in operation. The average yield of sugar per ton was 193 pounds. This produced a total yield of 893,000 tons of sugar on a raw value basis, a new state record. This is the good news about this crop. However, this production comes from the fact that the acreage harvested for sugar may have been as high as 360,000 acres. This is also a new state record. If this acreage estimate is accurate, then the tonnage yield would approach 25.7 tons of cane per acre and the sugar per acre yield would be less than 5000 pounds. This is the bad news since these yields are not high enough to qualify this industry as being highly efficient in the global environment in which it now finds itself competing.

There are numerous reasons why the per acre yields were this low and many of these were reported during the

(Continued on page 17)



FARM NOTES (Continued from page 16)

recent ASSCT meeting in Baton Rouge. Of major significance were the late spring freeze on March 12 and the drought conditions in portions of the belt during the summer and early fall. Maturity was completely off schedule in all areas of the belt while short cane was evident in many areas of the state. Heavy rains during the early harvest season kept sugar levels from climbing very high even though rainfall during November and December averaged below normal. These are just some of the reasons why yields were reduced during the 1993 harvest season giving this industry its fourth consecutive season of weather related reductions in cane and sugar yields.

AUSTRALIA TRIP

The Citizen Ambassador Program of the People to People Program founded by Dwight Eisenhower in 1956 has arranged an informative trip to visit the Australian sugar industry this coming fall. I am honored to have been selected to serve as delegation leader for this August 19 to September 3 trip, if enough participants can be selected. The primary professional objective of the delegation will be to exchange ideas and improve the understanding and perspective that these two leading sugar in-



dustries have with regard to sugarcane production, raw sugar processing, sugar refining, by-product utilization, research topics, and trade issues. To achieve this, the delegation will meet with their Australian counterparts in seminars, academic discussions, informal exchanges, field and factory visits, and research station visits.

Invitations are being sent out to all League members and any member of this industry is invited to consider participating in this trip. The itinerary, accommodations and cost of the trip have all been arranged by representatives of the Citizen Ambassador Program. If you do not receive information regarding this trip and would like to consider attending, call the League Office (504/448-3707) and we will send you the appropriate information.

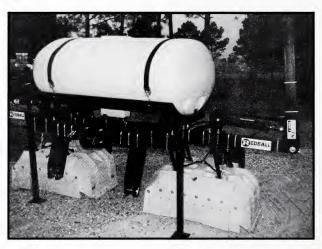


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ENVIRONMENTAL PERSPECTIVES

caught in the Ouachita River near Monroe, and at some other Louisiana locations. No one really knows if the occurrences are unusual or whether mercury in the concentrations reported are harmful in any way to humans eating the fish. However, it does not take much to frighten a misinformed public, or "create reader interest" in one viewpoint.

The occurrence of higher than average concentrations of mercury in fish does not necessarily indicate industrial pollution. The mercury naturally present in soil particles washed into a stream can be released by bio-chemical activity and accumulate in bass and other predatory fish. Some streams have a more favorable environment for alkylating mercury than others. The key ingredients are a source of mercury, nutrients and micro-organisms in abundance.

Locks and dams were constructed for navigation on the Ouachita many years ago, converting the stream from a free flowing river to a series of long, sluggish lakes. Local soils, naturally rich in mercury, tend to deposit in the ooze at the bottom of these lakes which have been enriched by paper mill waste and treated municipal sewage. The prolific biochemical activity in such lake ooze can release organic mercury which is rapidly assimilated in the aquaric food chain. It should come as no surprise that fish in the Ouachita have mercury.

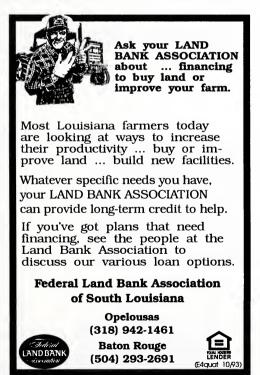
The mercury content in marshy soils along the Gulf of Mexico coast from

THE SUGAR BULLETIN 448-3707

(Continued from page 10)

Louisiana to Florida are among the highest in the Continental United States. Stream bottom ooze in the vicinity can be expected to release organic mercury and the local fishlife can therefore be expected to contain mercury. Sugar mills and cane farms discharge stormwater and treated wastewater to these streams, and you can bet that environmentalists will blame these local industries rather than Mother Nature if any mercury is found in fish there.

The way to minimize "natural" occurance of mercury in fishlife is to prevent soils from washing into lakes and streams (soil conservation). Urban, suburban and construction site runoff is as much or more to blame for soil erosion and resulting mercury alkylation than sugar cane farmers and millers.





NOTICE TO LANDLORD MEMBERS

Section V of the American Sugar Cane League Charter defines Landlord Member as 'an individual, partnership or corporation which leases its property to another for the production of sugar cane and receives as rental a percentage or share of the crops produced thereon a percentage or share of the proceeds of such crops shall be a landlord member. The dues for such membership shall be \$100.00 for each 1,000 tons (or fraction thereof) of sugarcane or the proceeds thereof received by such members as rent; provided. However, that the maximum dues for a landlord member shall be \$500.00 per year.'

This membership provides for voting rights and all privileges of membership. Also available is associate membership which is \$10.00 annually.

Interested parties please fill out the form below and return to the League office with your check.

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WASHINGTON UPDATE (Continued from page 5)

Crop Production Report

The 1993 production of sugarcane for sugar and seed is forecast at 30.5 million tons. This is unchanged from the last forecast published in the Sugar Bulletin for January, and represents a less than one percent increase from last year's output. The forecasts for Hawaii, Louisiana, and Texas were carried forward from an earlier forecast month. The Florida harvest, as of February 1, was about two-thirds complete.

					ES, 1991-		•,
STATE	AREA HA	RVESTED	YIELD ¹		PRODUCTION		
AND USE	1992	1993	1992	1993	1991	1992	1993
	1,000 ACRES		TONS		1,000 TONS		
For Sugar							
FL	426.0	433.0	33.2	33.0	14,937	14,143	14,289
HI2	61.7	58.5	88.0	89.0	5,857	5,430	5,207
LA ²	345.0	360.0	23.2	23.0	7,090	8,010	8,280
TX ²	37.7	43.5	34.2	30.5	1,076	1,290	1,331
US	870.4	895.0	33.2	32.5	28,960	28,873	29,107
For Seed							
FL	17.0	17.0	33.2	33.0	524	564	561
HI ²	6.2	5.0	31.0	29.2	204	192	146
LA ²	30.0	30.0	23.2	23.0	530	696	690
TX ²	1.6	0.9	23.8	23.3	34	38	21
US	54.8	52.9	27.2	26.8	1,292	1,490	1,418
For Sugar and Seed							
FL	443.0	450.0	33.2	33.0	15,461	14,707	14,850
HI ²	67.9	63.5	82.8	84.3	6,061	5,622	5,353
LA ²	375.0	390.0	23.2	23.0	7,620	8,706	8,970
TX ²	39.3	44.4	33.8	30.5	1,110	1,328	1,352
US	925.2	947.9	32.8	32.2	30,252	30,363	30,525

SUGARCANE: AREA HARVESTED VIELD AND PRODUCTION

¹ NET TONS.

² CURRENT ESTIMATE CARRIED FORWARD FROM EARLIER FORECAST.

No marketing allotments for 1994 FY 2nd quarter

The U.S. Department of Agriculture announced on January 4, 1994, that sugar marketing allotments for domestic sugar will not be established during the quarter of Fiscal Year 1994. This determination is based on December estimates of the U.S. Sugar situation and outlook for FY 1994. Re-estimates of the fiscal year sugar supply and distribution will be made quarterly to determine if marketing allotments are to be established later in the fiscal year.

(Continued on page 23)

THE SUGAR BULLETIN

WASHINGTON UPDATE

(Continued from page 22)

Rumors dispelled: Espy plans to remain Secretary of USDA

Despite flying rumors, Secretary Mike Espy is planning to stay on at agriculture, USDA Under Secretary Gene Moos told reporters last month. Although Espy has been rumored from virtually his first day at USDA to have his sights on the governor's office in his home state of Mississippi, Moos said Espy had "no intentions" of running and is looking forward to meeting the challenges of his present job. Mississippi's gubernatorial race is over a year away, so there is plenty of time for Espy to keep his future options open.

Paul Johnson appointed as Director of SCS

Paul Johnson has been named Chief of Soil Conservation and Stabilization at USDA. Johnson was formerly a representative in the Iowa General Assembly from 1984-90 and an assistant commissioner for Soil and Conservation in Iowa.



THE SUGAR BULLETIN

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IN THE FACTORY

simple with modern instruments which are relatively inexpensive. ICUMSA is not yet settled on a standard procedure for turbidity determination and this is a subject of ongoing study in several research groups. Several mills in Louisiana have instrumentation suitable for use with clarified juice since it is used with the antibody test for dextran. The data obtained is reliable and will show consistent or erratic performance of the clarifiers, but the detailed interpretation of the data remains a subject for research.

The measured turbidity is influenced by the quantity of suspended solids, their chemical characteristics and particle size. We have an ongoing study of these factors for both clarified juice and raw sugar. High turbidity values for raw sugar would be expected to predict filtration problems in the refinery but the relationships are not yet clear. Some examples of experimental observations follow which obviously need further study. Filtration of clarified juice through a sequential series of fine filters showed that most of the turbidity is due to material of apparent particle size less than one micron. The type of filter also has an effect on the filtrate turbidity. Different filter types with the same nominal pore size produce filtrates of very different turbidity. The turbidity of raw sugar solutions is often not constant until the solution has been prepared for an hour or more, but in some cases the turbidity is constant after a few minutes. This difference is not due to settling out of suspended solids since remixing the final solution does not increase turbidity. The explanation would appear to be the very slow solubilization of some suspended solids in the solution.

A wide range of experimental techniques are now available to study these subjects, and it is unfortunate that we are not able to compare juices and sugars produced in the past under different conditions. This is especially important for the variations observed in the quality of clarified juice, even within a single mill. The simplest explanation is to assume that this is due to variations in cane quality. This cannot be the case if two parallel clarifiers are giving quite different results or the separate trays of the clarifiers are giving different results.

One of the trains of thought I have had on this subject is as follows. Clarifier operation is judged on the absence of gross suspended solids rather than the background clarity. Mechanical harvesting, even with cane washing, and increased factory throughputs places an increased load on the clarification and filtration systems. Therefore, much attention is not paid as to how dirty might be the filtrate returned to the mix limed juice. Flocculants are used to increase settling rates to be able to cope with the increased flows in the system. However, the relationship between the turbidity (after removal of grass suspended solids) and the flocculant use is unclear. If a sample of clarified juice is placed in a beaker and left in the juice outlet system of the clarifier to keep it hot, then additional precipitation of floc is observed. Some questions that result from these thoughts and observations are whether we are allowing sufficient time for complete reaction in the clarifier, are the input conditions (pH especially) constant, and do we rely too much on the use of flocculants?

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The Sugar Bulletin

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U.S.A.

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 72 - No. 8

MAY, 1994

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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MAY, 1994

WASHINGTON UPDATE WITH DON WALLACE

GATT UPDATE

After seven years of negotiations, a new global trade agreement (GATT) was signed on April 15, 1994, in Marrekesh, Morocco. The treaty is projected to stimulate some \$45 trillion in new trade by the year 2005 according to Administration supporters of the GATT. However, the United States Congress has yet to determine how to fund it. Since GATT is estimated to cost \$13.9 billion in tariff collections over the next five years, Congress and the White House are required by law to come up with an equal amount or to waive the Budget consideration.

Senate Approves \$2.3 billion bill to restructure USDA

On April 13, 1994, the Senate approved S. 1970 which restructures the U.S. Department of Agriculture. The bill passed by a vote of 98-1 agreeing to a \$2.3 billion cut from the USDA budget over five years.

The Senate plan reduces the number of agencies from 43 to 28 and reduces the county offices by 1,100. The bill also consolidates all farm programs into the new Farm Service Agency (FSA) under the concept of one-stop shopping and creates a single food safety agency to oversee all USDA food safety and inspection programs. It establishes a single, consolidated conservation agency, the Natural Resources Conservation Service, which gives local control to final decisions regarding program recipients to county Agricultural Soil and Conservation Service committees. The bill also requires the consolidation of the USDA Washington offices before closing any of the 3,700 field offices.

Key differences in the House and Senate bills are:

• which agency within the department

should run the conservation programs, and

- how much autonomy should be given to state universities which do agricultural research, and
- the House version gives the department 6 undersecretaries where as the Senate version calls for nine.

The House bill is still pending before the House Agriculture Committee.

Delay of Worker Protection Standards signed by Clinton

President Clinton signed S. 1913, a bill to delay the implementation date of Environmental Protection Agency regulations to protect workers from toxic pesticides. These rules were supposed to take effect on April 15. With the passage of this bill, the implementation date is now January 1, 1995. The rule requires employers to provide farm workers with personal protection equipment, safety training, and warning signs to protect laborers from hazards of exposure to pesticides.

Crop Production Report

The U.S. sugar production in fiscal year 1993/94 is projected at 7.57 million short tons, raw value, which is up 30,000 tons from last month. There were upward revisions in the forecasts for

(Continued on page 10)



FARM NOTES By Dr. Charley Richard

CROP REPORT — DEDICATED RESEARCH FUNDING

In last month's article, with very little cane showing, I reported that conditions which affected the coming crop during the winter months had been good, and therefore there was reason to feel somewhat optimistic about the possibilities for this crop. However, now that cane has begun to germinate, it is apparent that there are plenty of problem fields. As of this writing on April 15, very little tillering has taken place and therefore many fields have less than adequate stands at this time. Many fields that were either cut earlier or planted early and germinated to a good stand in the fall are not regerminating well this spring. This affects the third stubble (cut earlier in the harvest season as second stubble) that growers were hoping to keep to get themselves out of the rotation problems following the major replanting in 1990. The first stubble that was cut early for seed as plant cane last fall, and some of the plant cane that was planted early last fall. In general, most fields that appear to have stand problems at this time came up to a good stand during the fall of 1993.

Some of this cane has been closely evaluated and it would appear that some fields do not have the below ground eyes to make an adequate stand. Other fields, although there are still live



eyes, have been slow to germinate and therefore appear as gappy stands. Warm, dry weather is needed at this time to force tillering and get the maximum amount of germination out of this crop.

DEDICATED RESEARCH FUNDING

Earlier this year the Dedicated Research Funding Committee met and reviewed projects proposed for funding through the special dues set aside for research. A total of 42 projects totaling \$780,801 was requested from the League. The Committee recommended and the Board of Directors approved that 29 projects be funded for a total of \$353,166. A listing of these projects broken down by category, along with their lead scientist appears below.

CROP IMPROVEMENT

Request for supplemental funding in support of the research programs of the USDA-ARS, Sugarcane Research Unit, Houma, LA by Dr. Ben Legendre.

Support for sugarcane field research in LAES by Dr. Fred Martin.

Maintaining sugarcane research at the Iberia Research Station by Dr. Howard Viator.

Labor support for the basic sugarcane breeding program at Houma, LA by Dr. Dave Burner.

Harvestability and testing of candidate varieties in the USDA infield program by Mr. Ed Dufrene.

Sugarcane cross appraisal methodology by Dr. Scott Milligan.

Molecular biology in sugarcane (two projects, California Institute of Biological Research & Cornell University, funded through the International Consortium on Sugarcane Biotechnology.

(Continued on page 12)

IMPACT OF LEAF SCALD AND YELLOW LEAF SYNDROME ON PARENTAL CLONES FOR USE IN 1994-95 CROSSING SEASON AT CANAL POINT

by J.D. Miller¹, B.L. Legendre², M.P. Grisham², J.C. Comstock¹, W.H. White², D.M. Burner²

EDITOR'S NOTE: The following article was sent to the Sugar Bulletin for publication by Dr. Jim Miller of the USDA – Agricultural Research Service in Canal Point, Florida. Because leaf scald is an important issue, I, along with Dr. Miller, think that it contains information you may be interested in. It gives the reaction of present commercials and shows how far ahead of release that varieties are used in the breeding program. Therefore, this article replaces Up Front With The League by Charles J. Melancon for this issue.

Leaf Scald was discovered in commercial fields in Louisiana in the fall of 1992 (5, 6). Hence, 5 of the 10 varieties grown commercially have been found to be naturally infected with leaf scald (3, 4). In 1992, 6,080 (6.4 percent) of the 95,719 sugarcane seedlings transplanted to the field were found to have leaf scald symptoms after becoming inadvertently infected in the greenhouse. Also, 18 of the 79 clones assigned permanent variety numbers in 1992 were eliminated from further testing because of natural leaf scald infection, and 20% of the clones in second line trials being considered for permanent variety number assignments in 1993 and 1994 were eliminated because of natural occurrence of leaf scald (3). The outbreak of leaf scald, as well as the discovery of another disease, "yellow leaf syndrome" (1), in Florida among parental clones in 1993, has motivated us to reevaluate the choice of parental clones for use in the

Louisiana sugarcane variety program. A leaf scald outbreak in Australia (2) was controlled by development of resistant varieties through parent selection. The purpose of this paper is to present information and reasoning used to select the parent of crosses to be made in 1994-95 at Canal Point for the Louisiana sugarcane industry.

Materials and Methods

Two inoculated leaf scald (LS) tests were conducted in 1993, one at Houma, Louisiana and another at Canal Point, Florida. Data are presented for 11 released varieties in both inoculated test and conditions of natural infection. Each variety was replicated three times in each test. In Florida, ten stalks, about 1 to 1.2m tall, from each plot were clipped at the top visible dewlap and a

(Continued on page 19)

¹ USDA-ARS, Sugarcane Production Research Unit, Canal Point, FL. 33438

² USDA-ARS, Sugarcane Research Unit, Houma, LA. 70361

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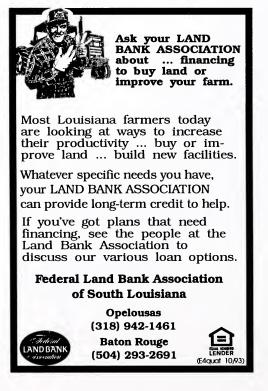
THE BATON ROUGE LINE

By Tom and Linda Spradley

Special Session

As we go to press, the Legislature is still in Special Session to determine new Congressional districts. Governor Edwards was reluctant to call the session, but upon seeing a consensus reached among the Congressmen to support the "sash plan" (the second black district basically running from Shreveport to Baton Rouge along the Mississippi River), he went ahead and issued the call.

Apparently, the Governor and legislative leadership underestimated the will of state legislators. In a surprise move, a plan sponsored by Rep. Robert Adley, which creates only one black district, was amended on to the House bill. However, this bill will more than



likely die, with a Senate version with two black districts winding up as the final plan.

Regular Session

The Regular Legislative Session, which is a "fiscal only" session, begins on April 25. The current thinking by the leadership is that this "fiscal only" session will conclude prior to Memorial Day with a month-long Special Session scheduled to begin June 1. Included in this session will be the issues of Congressional redistricting, crime, teacher evaluation, and most likely, a potpourri of other issues.

With the approval of Constitutional Amendment Number 1 in October, 1993, the legislative calendar and agenda have been materially changed. In even years, we will have a "fiscal only" session; in odd years a "regular" session where fiscal matters cannot be discussed. The 1994 Regular Session will be limited to:

> "legislation which provides for enactment of a general appropriations bill, implementation of a capital budget, for making an appropriation, levying or authorizing a new tax, increasing an existing tax, legislating with regards to tax exemptions, exclusions, deductions, reductions, repeal, or credits, or issuing bonds."

> > Article III, Section 2

Louisiana Constitution of 1974 However, since this system is new, all of the ramifications and nuances are not yet clear. For instance, we do not know yet what issues will actually be heard in a "fiscal" session. Staff has (Continued on page 14)

THE SUGAR BULLETIN

IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

COGENERATION

Last month in Baton Rouge there was a meeting of various groups with representatives of the Electric Power Research Institute to discuss the feasibility of biomass, a fuel for power generation. This group has issued a request for research proposals under the title of "Sustainable Biomass Systems" in which there would be a partnership between biomass producers and the utilities generating the electricity. Sugarcane is always considered to be a very productive source of biomass fuel, and therefore, our interest in the subject. The emphasis at the meeting was more on tree farms rather than crops such as cane or sorghum. One of the main reasons for this was the fact that cane cannot be burned without first being processed (milled) to remove a substantial part of the moisture. The juice so produced cannot be dumped and has to be processed further, to sugar or alcohol, and this both takes energy and complicates the operation.

There is also the question of scale of operation. A representative of an electric utility at the meeting said that the smallest viable generating unit for a modern utility based on a steam cycle is about 150 MW. If 10% of the energy involved is produced from biomass, then this would require about 10,000 acres in high production tree farms. Another way of looking at power production capacity is to consider what is planned for the sugar industry. A large bagasse based cogeneration system has begun construction in Florida. Taking the bagasse from over 20,000 tons of cane per day, the net electric power for export is expected to be about 70 MW. Although large for a sugar plant, this is small compared with the usual electric utility system.

Several years ago Bill Keenliside and I studied the options of power production from sugar cane. One of the aspects considered was the maximization of exportable energy (as electric power) by reduction of process energy using only sufficient milling to reduce the bagasse moisture to about 50%. Good preparation and two mills with no imbibition were considered sufficient. Less juice, but with high brix, would be produced. This would require less energy for processing to either sugar or alcohol. The increase in net electric power was therefore offset by a decrease in sugar production. Comparison of the revenues generated from the same quantity of cane by maximization of power with minimum sugar with that from minimization of power and maximization of sugar showed that, under all normal circumstances, sugar production was far more profitable. Electric power became more profitable when the price of sugar (c/lb) was lower than 0.8 times the price of power (c/kwh). Our inputs into the study did not include capital investments and the tax and/or incentive situation, but the conclusion was quite clear.

The obvious step would seem to be to optimize energy operations in the mill (Continued on page 15)

WASHINGTON UPDATE (Continued from page 4)

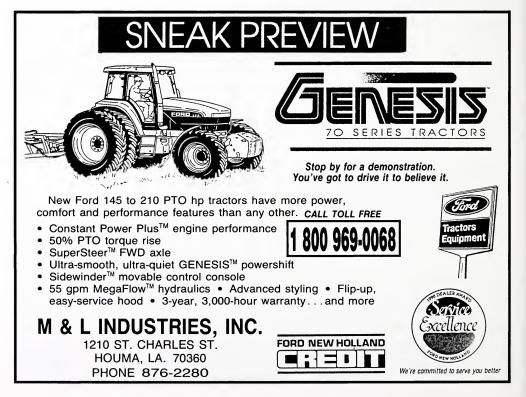
Florida and Texas due to the partial offset by a reduced estimate for Louisiana. Revisions are based on reported production through January and production forecasts submitted by processing firms to ASCS. Cane sugar production is forecast at 1.76 million tons in Florida. 680,000 tons in Hawaii, 890,000 tons in Louisiana, and 140,000 tons in Texas. Beginning stocks for 1993/94 are reduced because sugar in transit is removed from the stocks category and incorporated into "miscellaneous" for 1992/93. Projected ending stocks, unchanged from last month, would be the lowest since 1989/90. The cane sugar production estimate for 1992/93 is reduced 58,000 tons because of a revision in the estimate for Hawaii to 658,000 tons.

Chairman of powerful House Appropriations Committee selected

House Democrats gave Rep. David Obey (D-WI) the nod to become the new acting chairman of the House Appropriations Committee replacing the late Rep. William Natcher. Rep. Natcher, the former Chairman, passed away on March 29, 1994, from congestive heart failure. He held the longest consecutive voting record in the House and served 21 terms.

Congressman Jamie Whitten (D-MS) the legendary House Appropriations Committee Chairman, known as the "permanent secretary of Agriculture" announced in April that he would not seek re-election. The 84 year old Whitten was elected in 1941, and is the longest serving member in Congress.

(Continued on page 11)



WASHINGTON UPDATE

(Continued from page 10) After a stroke in 1992, Mr. Whitten was appointed as Chairman emeritus of the House Appropriations Committee and Mr. Natcher was appointed Chairman.

Majority Leader George Mitchell announces retirement from Senate

Senate Majority Leader George Mitchell (D-ME) announced his retirement, and immediately there was talk of his replacement. Senator Tom Daschle (D-SD), a member of the Senate Agriculture Committee, formally announced that he wants to succeed retiring Mitchell. Senator John Breaux had expressed interest in the position, but he has announced he does not plan to seek the post. Other possibilities include Sen. Jim Sasser (D-TN) Chairman of the Budget Committee, Sen. Patrick Leahy (D-VT) and Sen. David Pryor (D-AR), chairman and member of the Committee on Agriculture, respectively. A vote is expected in November.

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FARM NOTES (Continued from page 5)

Genetic transformation of sugarcane by Dr. James Irvine.

QTL mapping of sugar content in sugarcane by Dr. Andy Patterson.

CROP PRODUCTION

Louisiana sugar cane farm decision making and its impact on resource allocation by the Agricultural Economics and Agribusiness Department.

Stubble cane longevity, succession cane, and the effect of wide furrows on cane yield and cane quality by Dr. Ray Ricaud.

The Dedicated Research Funding Committee set aside monies for the benefit of the farm machinery committee to conduct research in field mechanization.

CROP PROTECTION

Characterization of plant resistance to the sugarcane borer *Diatraea saccharalis* (f.) in Louisiana candidate and commercial sugarcane varieties by Dr. Bill White.

Release of *Cotesia flavipes* for control of sugarcane borer in Louisiana by Dr. Bill White.

Develop methodology to screen sugarcane seedlings for leaf scald resistance by Dr. Jack Comstock.



Continued evaluation of distribution of leaf scald in Louisiana and the susceptibility of currently available varieties and germplasm by Dr. Mike Grisham.

Evaluation of resistance to stalk rots and factors affecting disease severity by Dr. Jeff Hoy.

Comparison of infection and spread of ration stunting disease in Louisiana sugarcane varieties by Dr. Jeff Hoy.

Factors influencing the severity of infestations of leaf spot and rust in Louisiana sugarcane by Dr. Calvin Viator.

Weed control in sugarcane by Dr. Jim Griffin.

Development of management strategies for the control of johnsongrass and bermudagrass in sugarcane: chemical control by Dr. Ed Richard.

PROCESSING

Textiles and geotextiles from sugarcane by Dr. John Collier.

Milling proposal by Dr. Harold Birkett.

Investigation of cane quality and factory performance as part of the evaluation of alternative harvesting systems by Dr. Steve Clarke.

Installation of ASI triple effect evaporator at a mill for study of scaling and instrumentation systems by Dr. Steve Clarke.

Color formation in the sugar mill by Dr. Donal Day.

Microfiltration of cane juice on crossflow ceramic membranes by Dr. Michael Saska.

Automation of multiple effect evaporators III by Dr. Arch Hill.

Design and management of wash water treatment systems by Dr. Donald Adrian.

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THE BATON ROUGE LINE

been told to draft any bill requested by a legislator, regardless of subject matter. As you will recall, our Supreme Court has ruled on the matter of "germane," in essence stating that if the Speaker of the House or President of the Senate believes an issue is germane, then it is indeed, germane.

Grass Roots

Thanks go to all of you who returned completed grass roots questionnaires to us. You will play an important role in the League's legislative process. We will contact you as needed during this session; following the session, we will work with those of you who expressed an interest in getting to know your legislator better.

Weight Limits Bill

League floor leaders in the Legisla-

(Continued from page 8)

ture, Senator Mike Foster and Representative Sydnie Mae Durand, plan to introduce a bill this year regarding weight limits for cane trucks.

The bill will increase weight limits, limit violations to average daily weights, increase the permit to \$50, limit load height, require drug testing for drivers, and create an enforcement time limit on violations.

Why is the League doing this? Public demand has some of our friendliest legislators talking about doing something about cane hauling problems. Therefore, it boils down to this: If we make the changes, they will be more to our favor than if they make the changes. The League's State Legislative Committee and the Board of Directors feel that change is inevitable, and that we will be better off if we manage the circumstances.



IN THE FACTORY (Continued from page 9)

to produce as much surplus energy as possible without sacrificing sugar recovery. Whether this is actually done depends on local circumstances. Many sugar cane industries, especially those with long crops, have chosen the cogeneration option but others have not. For example, Hawaii, Pakistan and Mauritius generate electric power for export, but Australia does not. In part, it is due to the local availability of other fuels and the distance of the mills from major electric power consumers. The situation in Brazil is outlined in a recent issue of the International Sugar Journal. Plans are being made for many of the mills producing sugar and alcohol to generate power for the grid. Some of the producers are reluctant due to the large capital investment involved and the low price to be paid for the power, even though this is about double the previous price.

An alternative approach is to grow sugar cane for the maximum biomass, rather than sugar content, and to process the whole above ground plant. Several varieties of "energy cane" have been developed with this purpose, but this subject has been dormant for several years. However, the Federal Government has just funded an extensive study in Puerto Rico of the application of this type of cane, or some tropical grasses, for power generation. The question of processing of the cane to prepare it for the boilers still remains. It will be interesting to watch how this all works out.

One of the interesting applications of energy from cane is for the development of varieties. Higher fiber canes often have higher yields in the field and, if the sugar yield per acre can be maintained or even increased, is it practical to process this type of cane? A higher fiber content cane would usually result in reduced mill throughput but is this a problem if mills could run a little longer?

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THE LACANE TIGER 2 R "EXPERIENCE, TECHNOLOG



I HARVESTING SYSTEM

CUSTOMER COMMENTS...

Joe Beaud: Sugarland Plantation (New Roads, La.)

I had a new operator running the La Cane 2 Row Harvester this past year and I find that this harvester was a little easier to run than the other machines I've been associated with.

Stacking cane on the first 2 rows are mostly in the hands of the operator, but it seems to be easier for the operator to make the cane stack properly across the row with this machine.

I spent a good bit of time riding on the harvester last year. You can see the bottom blade better. This gives the operator the ability to do a more efficient job of cutting the cane near the top of the row where he is suppose to.

I also liked the 4 wheel drive set up for cutting ditch brakes. Usually a 3 wheel machine has the tendency to pull towards the ditch, especially in soft conditions. The La Cane harvester holds the row better. Straddling over 2 rows also gives you the ability to back up over the heap of cane you just cut. This is an advantage in areas where you have short rows, and would normally lose time.

The most impressive part of the machine to me is how well it did on the fly rows.

Frank French: Gonsoulin Brothers (New Iberia, La.)

The harvester lived up to the expectations that we had. This past November we had a lot of rain and we were still able to get into our bad land and get the cane out when we needed to.

The stacking ability is just as good in heavy black land as it is in regular conditions. The other 2 row harvesters have a tendency to windrow or drop more cane when conditions get bad.

With 4 wheels, we eliminated a tire passing under the heap and most of the mud problems our loader operator had to deal with before. I noticed there was also a lot less sinking than there are with 3 wheel harvesters.

Maintenance is not a problem. Every machine has some maintenance. I may spend a few more minutes to get it ready, but I will easily catch that up in the field.

I like the way the machine is set up. I've got better bottom blade visibility from inside the cab. Also the temperature in the cab is more comfortable because of the way the engine and hydraulics are set up. I like the idea of having the hydraulics in the open. It makes it a lot easier to get to, if you have to work on them. Everything seems to run cooler too.

We believe we made the right choice by purchasing the La Cane 2 Row Harvester.

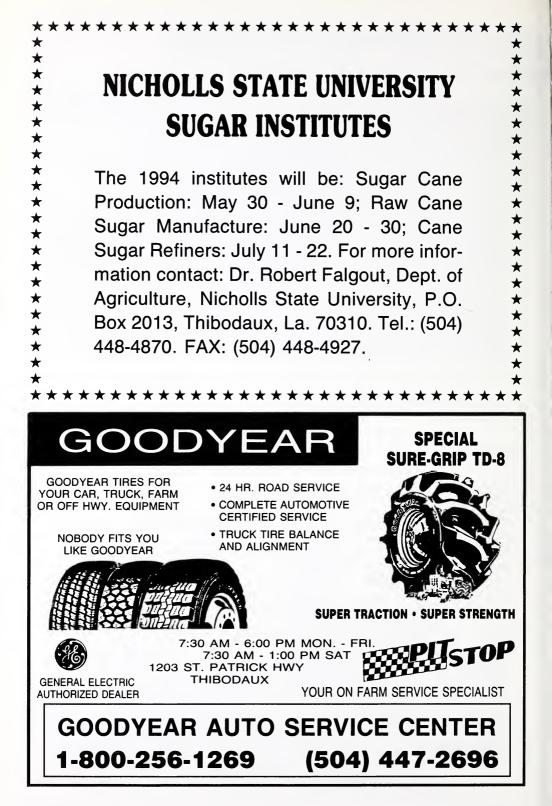
Mitch Ourso: Ourso Farms (White Castle, La.)

We saw a big difference in the mud samples at the mill this year. There was less mud mixed with the cane. The La Cane harvester definitely helped the loader to do a better job.

All harvesters do a pretty good job in straight cane, but varieties like 153 and 8289 are some of the harder ones to cut, especially when you are dealing with heavy tonnage. The La Cane harvester was doing a much better job, particularly in down cane. Whether we were bucking the cane or going with it, we saw a minimal amount of cane left in the field.

As for maintenance on the harvester, I don't mind spending an extra 10 minutes getting the machine ready in the morning in comparison to the job it does for me in the field. I don't think there is a machine around that is as easy to operate, that will do as well as this one does in all the conditions we are faced with on our farm.

Isn't it time for you to join the LaCane Tiger Team too?



IMPACT OF LEAF SCALD

suspension of leaf scald bacteria (108 bacterial/ml) was applied to the cut surfaces. In Louisiana all stalks in each plot were similarly inoculated. Two types of ratings were made on each plot when stalks were mature. One consisted of rating the most severely infected stalk in the plot and the other was the percentage of inoculated stalks that were infected. A rating of the most susceptible stalk was on a 1 to 9 scale. A 1 showed no leaf scald symptoms, a 3 showed only single white pencil line symptoms, a 5 showed systemic infection (white pencil lines and/or chloroticnecrotic symptoms) on more than one non-inoculated leaf, a 7 showed systemic infections in the younger leaves of the plant, and a 9 showed either dead or dying top leaves or had lateral buds that germinated with typical leaf scald symptoms. Data collected in the Louisiana and Florida leaf scald inoculated tests were compared by correlations. Varieties with ratings < 3 were rated as resistant, varieties with rating >3 but <7were rated as intermediate, and varieties with ratings >7 were rated as susceptible.

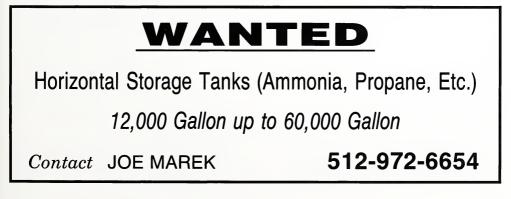
Additional data were obtained from counts of the number of infected plants in the seedling nurseries at Houma in the spring of 1993. Seedlings were

(Continued from page 6)

grown from true seed in three greenhouses at the Sugarcane Field Laboratory, Houma, LA along with plants of the check cultivars (CP 65-357, CP 70-321, CP 72-370, and CP 74-383). At least some plants of CP 74-383 were naturally infected and the leaf scald infection was apparently spread throughout the seedling greenhouses by routine weekly clipping of seedlings prior to their being transplanted to the field. Infection levels varied among the seedlings located on different benches. Seedlings on each bench were placed in one of 3 groups based on the level of infection among all seedlings on that bench. Average infection levels among seedling in Group 1 [included benches 3.1 (Greenhouse 3, bench 1), 3.2, and 4.1] ranged from 0.7 to 2.2%; and group 2

(Continued on page 20)





IMPACT OF LEAF SCALD

(included benches 5.1, 5.2, 5.3, and self stripping test crosses) ranged from 2.8 to 4.1%; and group 3 (included benches 4.2, 4.3, 4.4, and 5.4) ranged from 9.1 to 12.8%. The level of natural leaf scald infection in plants grown for the breeding program at Canal Point was recorded. Also noted were plants that exhibited yellow-leaf-syndrome (YLS) symptoms (1). YLS symptoms consist of a yellowing of the mid-rib on the lower surface of leaves, sometimes a reddening on the upper surface of the mid rib occurs with expansion of the reddening onto the upper surface of the lamina. Symptoms usually occur on older leaves with younger leaves showing symptoms as the disease progresses. Plants rated as "YLS moderate" showed symptoms on several leaves. Plants rated as "YLS severe" had the entire canopy affected and in several cases varieties that nor-

(Continued from page 19)

mally flowered were stunted so severely that no tassels were produced.

Results and Discussion

The plant cane data from the inoculated LS test and from natural infection ratings were in general agreement (Table 1). There was good agreement in varieties rated as resistant but more variability occurred in those rated as intermediate or susceptible. Data from the average scores in the Louisiana and Florida tests were in much better agreement (r = 0.62) than the highest score (r = 0.47) or the percent infected stalks (r = 0.42) (data not shown). Data from the average scores may be more reflective of the commercial potential of a variety for leaf scald resistance than either the highest score or percent infected stalks.

Seedlings from greenhouse benches (Continued on page 21)



IMPACT OF LEAF SCALD

were grouped according to the average infection rate of the benches (data not shown). We think the difference in average infection rates between benches was due more to the pattern of trimming rather than a difference in resistance among seedlings. In several instances the same cross was planted in more than one group and had different levels of infection. The number of crosses and seedlings, and the average percent infection per cross averaged over the female parents (the parent had to be used in >3crosses to be included) in the various groups were as follows: group 1, 43 crosses, 8,312 seedlings, and 1.2%; group 2, 197 crosses, 30,914 seedlings, and 2.6%; and group 3, 130 crosses, 27,563 seedlings, and 11.4%. It was readily apparent that certain female parents had a higher frequency of susceptible offspring than others in the same group. US 91-12 in group 1, and CP 74-383, CP 88-783, CP 89-837, CP 89-846, and L 88-78 in group 2 produced higher rates of susceptible progeny (data not shown) than other varieties in those groups.

The best screening took place in group 3 which had an average infection rate of 11.4%. Again, CP 74-383 and CP 88-783 were identified as parents producing high percentages of susceptible offspring. Other parental varieties in group 3 that produced high percentages of susceptible offspring were CP 70-330, CP 88-769, CP 89-846, CP 89-884, and US 90-25.

We also investigated the contribution of the male parent to susceptibility using the same classification scheme. The following groups were assigned: group 1, 65 crosses, 12,588 seedlings, and 1.4%; group 2, 210 crosses, 33,330 seedlings, and 2.5%; and group 3, 150 crosses, 33,524 seedlings and 10.5%.

(Continued from page 20)

One cross in group 1 with LCP 82-89 as the male parent had 10.2% infected seedlings. In group 2 the high average infection rates per male parent were not as readily apparent. However, the male parents were usually used over a wider range of females so that a high degree of susceptibility in one cross would not be readily detected in the progeny mean. This is further illustrated by the high ranges (0-26.8%) that occur in progenies of CP 88-702, CP 88-764, CP 89-885, and LCP 82-89 (data not shown). Group 3 contained the male parents that transmitted the highest percent susceptibility to their progeny. The range must be considered as well as the average percent infected progeny. For example, CP 61-39, LCP 85-384, and LCP 87-472 had the highest percentage of infected progeny but their ranges differ by a factor of 5-6. This was interpreted to mean that progeny of crosses of CP 61-39 and LCP 87-472 were uniformly more susceptible than those with LCP 85-384. Some crosses with LCP 85-384 showed a high level of resistance. Other clones with lower mean number of infected progeny but wide ranges were CP 76-331, CP 83-632, CP 88-702, LCP 82-89, and LCP 85-358 (which showed the widest range).

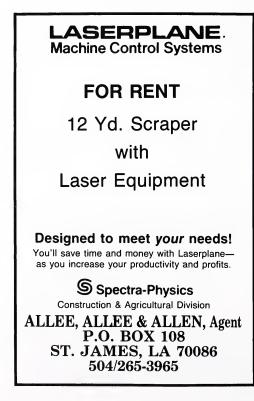
Another way to evaluate parents (Continued on page 22)



IMPACT OF LEAF SCALD

was by ranking the crosses based on the percent infected seedlings. Of the 168 crosses in group 3, the 33 crosses (20%) producing the highest percent infected seedlings are shown in (Table 2). The ratio of the number of times a female parent's progeny ranked in the 20% highest susceptible crosses over the total times it was used as a female parent in that group is also presented in Table 2. In general, when susceptible clones were used as females they had a slightly higher frequency of susceptible offspring than when they were used as males. Notable exceptions were LCP 85-384 and LCP 87-472 which produced high numbers of susceptible progeny when they were used as male parents.

The parents used in the 33 most resistant crosses from group 3 are listed in Table 3. Infection rates ranged from



(Continued from page 21)

0-4.8%. Some of the same clones listed in Table 2 (CP 79-318, CP 79-348, CP 88-702, CP 88-769, LCP 85-358, and L 88-46) appear as parents of the most resistant crosses. For most parental clones, the crosses seemed to fall into almost a normal distribution of resistant to susceptible with the exception of a few parents that had very high levels of resistance or susceptibility, in their progeny. Clones CP 70-321, CP 78-304, CP 91-528, CP 91-578, and LCP 86-454 were important exceptions because their offspring were skewed strongly to resistance.

Another disease that should be considered in parental selection for Louisiana is the (YLS) (1). A listing of the more seriously affected parental varieties used in 1993-94 by YLS and natural LS infection are shown in Table 4. We believe that clones labeled as YLS severe or LS severe should not be used as parents; and clones labeled with YLS moderate and LS should be used with caution. We suggest this restriction in the use of susceptible parents to increase the probability of obtaining progeny resistant to both LS and YLS. The list of parental clones shown in Table 5 will be used as parents to produce seed for Louisiana in the 1994-95 crossing season. Many of the clones shown in the list have not been thoroughly tested for LS resistance and may be dropped from the list as additional data are obtained.

In summary, LS and YLS will eliminate many varieties used in the Louisiana breeding program. Other industries, notably Australia (2), have controlled LS with the development of resistant varieties through parent selection. Therefore, we feel that with adequate screening and the judicious selection of

(Continued on page 24)

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Very Truly Yours, Irving L. Boudreaux Chairman Jeanerette Museum Board

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IMPACT OF LEAF SCALD

parental clones, resistant varieties with acceptable agronomic traits and yield can be selected for commercial use in the mainland sugarcane industries.

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Variation	Inoculate	d test data	Field Obse	Field Observation	
Variety	LA.	FL.	LA.ª	FL.⁵	
CP 65-357	I	R	0	3/6	
CP 70-321	R	R	2	0/7	
CP 72-370	I	R	0	2/9	
CP 74-383	I	S	8	5/11	
CP 76-331	R	R	0	0/15	
CP 79-318	R	R	0	0/12	
LCP 82-89	I	I	7	4/18	
LHo 83-153	R	R	1	0/8	
LCP 85-384	R	R	0 ^c	0/16	
HoCP 85-845	T	I	11°	0/10	

 Table 1. Results of inoculated and natural infection tests for leaf scald for 10 Lousiana sugarcane varieties.

^a Number of fields on commercial farms of a given variety with natural occurrence of leaf scald found during the spring 1993 survey of the industry or during the 1993 growing season (Hoy and Grisham, unpublished). Not all varieties were observed in equal numbers of fields.

^b Natural infection in cane area. Numerator is number of infected plants and denominator is total number of plants of a given variety.

° Number of fields with leaf scald out of 43 secondary seedcane increase locations.

(Continued on page 25)

THE SUGAR BULLETIN

Female	Number of crosses in top 20%	Male	Number of crosses in top 20% ^b	
CP 61-37°	1/1	CP 76-331	1/6	
CP 65-357°	1/3	CP 79-348°	2/8	
CP 70-330°	2/4	CP 83-632	1/11	
CP 79-318	1/8	CP 85-830°	1/2	
CP 79-348°	1/3	CP 85-845	1/8	
CP 86-901°	1/2	CP 86-901°	2/5	
CP 88-702°	1/1	CP 88-702	2/13	
CP 88-755ª	2/6	CP 91-576°	1/3	
CP 88-769°	2/4	LCP 82-89	2/15	
CP 88-783°	3/5	LCP 85-358	1/8	
CP 89-837°	2/9	LCP 85-384°	10/12	
CP 89-846 ^a	1/3	LCP 87-472°	3/3	
CP 89-855	1/5	Muntok Java ^c	1/1	
CP 89-884°	2/5	US 91-15	1/6	
CP 91-502°	1/1	US 91-16	1/5	
CP 91-563 ^a	1/1	US 91-19°	1/2	
LCP 85-358°	1/4			
LCP 85-376°	1/2			
LCP 86-408°	1/3			
LCP 88-78°	2/6			
L 88-46	1/6			
US 90-18°	1/4			
US 90-25°	3/6			
Totals/Percentage	33/92 = 35.9%		31/108 = 28.7%	

 Table 2. Female and male parents of the 33 crosses^a (20%) from group 3 that produced the highest percentage susceptible progeny.

^a A total of 33 of 168 crosses (20%) which produced the most susceptible crosses in group 3 with the percentage of susceptible seedlings ranging from 16.7 to 30.1%.

^b Ratio of the number of crosses in which a female/male parent's progeny ranked in the 20% most susceptible crosses to the total number of crosses in which that clone appeared as a female/male parent.

^c Parents with \geq 25% of their crosses in the 20% most susceptible crosses.

(Continued on page 26)

Female	Number of crosses in top 20%	Male	Number of crosses in top 20% ^b	
CP 65-357	1/3	CP 70-1133	1/1	
CP 70-321	3/4	CP 76-331	1/6	
CP 79-318	2/8	CP 78-304	2/3	
CP 79-332	2/4	CP 79-348	3/8	
HoCP 85-845	1/1	CP 83-632	1/11	
CP 87-644	1/3	CP 85-1491	1/2	
CP 88-739	1/1	CP 87-609	1/3	
CP 88-749	1/1	CP 88-702	4/13	
CP 88-765	2/4	CP 88-764	2/3	
CP 89-837	2/9	CP 88-769	1/7	
CP 89-843	1/4	CP 91-576	1/3	
CP 89-845	1/1	L 65-69	2/4	
CP 89-855	1/5	LCP 82-89	2/15	
CP 91-528	2/2	LCP 85-358	1/8	
CP 91-577	1/2	LCP 86-454	3/5	
CP 91-578	2/2	US 57-11-2	1/2	
LCP 81-10	1/3	US 91-15	2/6	
LCP 82-89	1/2	US 91-16	2/5	
LCP 85-358	2/4	WHW Sel	1/1	
LCP 86-46	1/6			
NCo 310	1/1			
NG 77-193	1/1			
US 91-1	1/2			
US 91-3	1/1			
Totals/Percentage	33/74 = 44.6%		32/106 = 30.2%	

 Table 3. Female and male parents of the 33 crosses^a (20%) from group 3 that produced the most resistant progeny.

^a A total of 33 of 168 crosses (20%) that produced the most resistant crosses in group 3 with the percentage of susceptible seedlings ranging from 0 to 4.8%.

^b Ratio of the number of crosses in which a female/male parent's progeny ranked in the 20% most resistant crosses to the total number of crosses in which that clone appeared as a female/male parent.

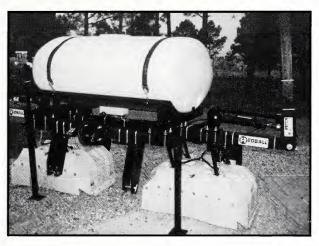
(Continued on page 28)

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IMPACT OF LEAF SCALD (Continued from page 26)

severely enough to affect tassel production.				
Louisiana		Texas		
CP 65-357	Leaf Scald	TCP 84-3266	YLS (Severe, No tassels)	
CP 70-321	YLS (Moderate)	TCP 86-3369	YLS	
CP 74-383	YLS (Severe)	TCP 86-3374	YLS	
CP 76-331	YLS (Moderate) ^a	TCP 87-3388	YLS (Moderate)	
CP 79-318	YLS (Severe, few tassels)			
CP 79-348	Leaf Scald (Severe)		Florida	
CP 87-615	YLS (Severe)	CP 70-1133	YLS	
CP 87-618	YLS (Severe, No tassels)	CP 72-1210	YLS (Moderate)	
CP 87-652	Leaf Scald	CP 75-1632	YLS	
CP 87-658	YLS (Severe, No tassels)	CP 78-2114	YLS	
CP 87-663	YLS (Moderate, No tassels)	CP 81-2149	YLS (Severe)	
CP 88-702	YLS (Severe) ^a	CP 82-1505	YLS (Moderate)	
CP 88-739	YLS (Severe)	CP 86-1664	YLS (Moderate)	
CP 88-769	YLS (Severe, No tassels)	CP 86-2024	YLS (Moderate)	
CP 89-811	Leaf Scald (Moderate)	CP 87-1274	YLS (Moderate)	
CP 89-843	Leaf Scald	CP 88-1409	YLS (Moderate)	
CP 89-859	YLS (Severe, few tassels)	CP 88-1834	YLS (Moderate)	
CP 89-889	YLS (Severe)	CP 88-1912	YLS (Moderate)	
CP 90-922	YLS (Moderate)	CL 61-620	YLS (Moderate)	
CP 90-955	Leaf Scald (Severe)	US 90-1092	YLS (Moderate)	
CP 90-987	YLS (Moderate, few tassels)	US 90-1095	YLS (Moderate)	
LCP 82-89	YLS (Severe, few tassels)	US 90-1097	YLS (Moderate)	
LCP 84-222	YLS	US 90-1100	YLS (Severe)	
LCP 85-341	YLS (Moderate, several tassels)	US 90-1101	YLS (Severe)	
LCP 85-376	Leaf Scald	US 90-1103	YLS (Severe)	
LCP 85-384	YLS	US 90-1106	YLS (Severe)	
L 88-63	YLS			
US 90-20	YLS (Moderate)			
US 90-22	YLS (Moderate)			

Table 4. Varieties that showed "yellow-leaf-syndrome" or leaf scald symptoms severely enough to affect tassel production.

^a No obvious effect on tassel production.

(Continued on page 29)

 Table 5.
 Proposed list of parents for Louisiana crosses in the 1994-95 crossing season at Canal Point, FL.

CP 57-614	CP 90-935	CP 92-618	LHo 83-153 ª	US 90-27 ª	
CP 70-321 ª	CP 90-941	CP 92-622	LCP 85-358 ª	US 92-10*	
CP 70-330 ª	CP 90-942	CP 92-624	LCP 85-384	US 92-11 ª	
CP 77-310	CP 90-951	CP 92-629	LCP 86-426 ^a	US 92-12ª	
CP 82-537 ^a	CP 90-952	CP 92-631	LCP 86-454 ^a	US 93-15ª	
CP 82-550	CP 90-956	CP 92-634	LCP 87-17	US 93-16ª	
CP 83-606	CP 90-957	CP 92-644	L 88-46	US 93-17ª	
CP 83-632	CP 90-962	CP 92-645	L 88-63		
CP 84-730	CP 90-963	CP 92-648	L 89-113		
CP 84-746	CP 90-977	CP 92-654	L 89-152		
CP 85-815	CP 90-987 ^a	CP 92-657	L 90-178		
HoCP 85-845 ^a	CP 91-523	CP 92-658	L 90-191		
CP 87-644	CP 91-527	CP 92-659	L 91-230		
CP 88-757	CP 91-534	CP 92-660	L 91-232		
CP 88-764	CP 91-542	CP 92-663	L 91-250		
CP 89-800	CP 91-552	CP 92-664	L 91-255		
CP 89-821	CP 91-555	CP 92-665	L 91-261		
CP 89-825	CP 91-558	CP 92-666	L 91-264		
CP 89-835	CP 91-566	CP 92-671	L 91-266		
CP 89-843	CP 91-573 ª	CP 92-674	L 91-276		
CP 89-845	CP 91-574ª	CP 92-675	L 91-281		
CP 89-846	CP 91-575 ª	CP 92-676	L 91-285		
CP 89-855	CP 91-576 ª	CP 92-678 ª	L 91-286		
CP 89-879	CP 92-607	CP 93-775 ª	L 91-288		
CP 89-884	CP 92-611	CP 93-776ª	L 91-290		
CP 89-888	CP 92-612	L 75-56	US 90-21 ª		
CP 90-921	CP 92-614	LCP 81-10	US 90-24ª		
CP 90-923	CP 92-616	LCP 83-149	US 90-26ª		

^a Recurrent selection for borer resistance program.

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ANNOUNCING THE ANNUAL CONTACT COMMITTEE MEETING OF THE AMERICAN SUGAR CANE LEAGUE OF THE USA, INC. WEDNESDAY, JULY 29, 1994 FIELD TOUR 9:00 A.M. HEBERT BROS. FARM INDOOR MEETING 10:00 A.M. **RIENZI ROOM** HOWARD JOHNSON LODGE 201 N. CANAL BLVD. THIBODAUX, LOUISIANA (SEE PAGE 8 FOR DETAILS)

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The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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UP FRONT WITH THE LEAGUE By Charles J. Melancon

ANNUAL GROWER MEETINGS

This past month has not been much different from the preceding year with little opportunity for the "proverbial grass" to grow under our feet here at the League. During the past month, we held grower meetings in Jeanerette, Bunkie, Addis, and Thibodaux. It was really good to see so many growers take the time to come to these meetings especially when a lot of you were attempting to catch up on your fertilizing after the rain had kept many of you out of the fields during that time.

These grower meetings are primarily for you: to get reports from the staff and officers of the League, to inquire about your League's activities on your behalf, and for those questions that arise in your mind during the year. At grower meetings we will tell you things as we best discern them at the time in response to those questions. It may not always be what you want to hear, but the answers will be what we believe to be true at the time that we impart this information to you.

Remember that we work for you, and many days I anguish over the fact that I cannot wave a magic wand to make everything better for everyone. That solution is only found in fairy tales, but I can assure you that your industry leadership and the staff are doing the best that they can every day on your behalf. We only hope that in time Mother Nature will give you a break and that all our efforts will come to fruition for you.

FEDERAL CROP INSURANCE

During this past month, Charley Richard and I worked with several peo-

ple to review the outline of coverages under the new proposed Federal Crop Insurance Program. What we found in the overview was a program of crop insurance that we did not feel was very good as it addressed sugarcane. A preliminary draft of comments discussing loss threshold, caps on payments, gross-earnings limitations by producers, and other areas of concern were sent to Ken Ackerman with USDA who is in charge of the Federal Crop Insurance Program.

Additionally, we have shared those views with the Farm Bureau, the ASCS. Commissioner Odom's office, and our Congressional delegation. We do not feel that what we have seen thus far is in the best interest of the Louisiana sugarcane producers. To be forced to participate in a program of insurance that will conceivably not provide for any payments even when there is a covered loss is, in my opinion, not very good. We will attempt to keep you updated on this matter. As explained to Commissioner Odom, who is very supportive of a reformed crop-insurance program, we feel that it is necessary to have a viable and workable insurance program for all commodities and not just an insurance program that works for most commodities.

SUGAR ASSOCIATION

During April, I attended the Sugar Association Annual meeting and Budget Committee meeting in Washington. It was good to see that some of the research is showing some promise. Specifically, there are several on-going research projects which may (Continued on page 27)

THE SUGAR BULLETIN

WASHINGTON UPDATE WITH DON WALLACE

GATT UPDATE

Leon Panetta, Office of Management and Budget Director, stated that the White House intends to have legislation drafted by the middle of June that will address how to make up for lost tariff revenue under GATT. Members of the House and Senate Agriculture Committee have made it clear they could not vote to ratify the Uruguay Round pact if agriculture suffers program cuts to pay for the lost revenue estimated at \$14 billion. This is the estimated loss over the first five years that the new trade agreement would be in effect.

On April 22, 1994, Secretary of Agriculture Mike Espy and U.S. Trade Representative Mickey Kantor announced that the United States had formally notified other GATT member countries of the U.S. intention to take action on grain imports. Due to the notification, the U.S. will be allowed, after ninety days, to impose higher tariffs on tariff-rate quotas on grain. GATT rules call for Canada, the only significant exporter of grains to the U.S., to try to agree with the U.S. on a negotiated solution during this ninetyday period. Should they fail to reach an agreement, the United States may proceed unilaterally; but, Canada would then be able to exercise GATT rights as well. The United States and Canada have had bilateral negotiations since December, 1993 over several agricultural products (sugar, wheat, barley, poultry, peanut products and dairy) that will be the subject of new rules because of the combination of the Uruguay Round and the NAFTA. Secretary Espy stated that this "announcement is about achieving a fair solution not only for wheat, but a wide range of agricultural commodities that we have been discussing with Canada." Ambassador Kantor reassured that although the U.S. is

prepared to exercise its rights under GATT and NAFTA, it is also willing to negotiate a solution to the agricultural problems of both countries.

MARKET ALLOTMENTS UNNECESSARY FOR FY 94 3RD QUARTER

The U.S. Department of Agriculture announced that marketing allotments for domestic sugar will not be established during the third quarter of fiscal year 1994. This determination was based on March estimates of the U.S. sugar situation and outlook for fiscal year 1994. Re-estimates of the fiscal year sugar supply and distribution will again be made in June to determine if marketing allotments are to be established later in the fiscal year.

U.S. SUGAR PRODUCTION ESTIMATES

U.S. sugar projection in fiscal year 1994/95 is projected at 7.67 million short tons, raw value, up 1.5 percent from 1993/94. Increased beet sugar output, the result of additional planted acreage and a likely return to normal vields. should more than offset lower cane sugar production ensuing from the closure of two sugar mills in Hawaii. Sugar deliveries in 1994/95 are projected to increase 1.4 percent to 9.275 million tons. Fiscal year 1993/94 sugar production is forecast 20,000 tons below the April level because of lower production in Hawaii. Forecast deliveries in 1993/94 are reduced 50,000 tons because of lower than expected deliveries in the first half of the year and increased imports of sugar-containing products.

(Continued on page 6)

THE SUGAR BULLETIN 448-3707

WASHINGTON UPDATE (Continued from page 5)

ltems	1992/93	1993/94 Estimates April May		1994/95 Projections May
	1,000 short tons, raw value			
Beginning stocks ² Production ² Beet Sugar ³ Cane Sugar ⁴ Imports ² Under quota ⁵ Other ⁶ Total supply	1,450 7,773 4,392 3,381 2,039 1,335 704 11,262	1,727 7,580 4,100 3,480 1,775 1,125 650 11,082	1,727 7,560 4,100 3,460 1,775 1,125 650 11,062	1,322 7,670 4,300 3,370 NA NA NA NA
Exports ² ⁷ Domestic deliveries ² Domestic food use Other ⁸ Miscellaneous ⁹ Use, Total Ending stocks ² Stocks to use ratio	486 9,063 8,900 163 (14) 9,535 1,727 18,1	590 9,200 9,065 135 0 9,790 1,292	590 9,150 9,015 135 0 9,740 1,322	540 9,275 9,100 175 0 9,815 NA NA

WASDE-290-11 U.S. Sugar Supply and Use¹

¹ Fiscal years beginning Oct. 1. Puerto Rico not included.

² Historical data are from ASCS, "Sweetener Market Data."

- ³ Forecast for 1994/95 is based on intended plantings in the March 31 "Prospective Plantings." Forecasts of percent of area harvested and beet yield are equal to 1989-93 averages excluding the high and low years. Sugar recovery from beets excluding net additional sugar from desugarization of molasses is the projected linear trend of 1982-93 recoveries. Net additional sugar from molasses is forecast at 235,000 STRV.
- ⁴ Forecast for 1994/95 is based on estimates of sugarcane area harvested for sugar in each state which reflect information from producers, processors, and other knowledgeable sources; and forecast sugarcane yields and sugar recovery from cane equal to the 1989-93 average excluding the high and low years for each state.
- ⁵ Actual arrivals under the tariff rate quota with late entries and quota overfills assigned to the fiscal year in which they actually arrived. Estimated imports under quota in 1993/94 assume a shortfall of 40,000 tons from the 2-year, 2.5 million STRV quota for 1992/93 and 1993/94. The quota for 1994/95 has not been announced.

⁶ Quota exempt imports (for reexport, for polyhydric alcohol, from Canada, and high-duty).

- 7 Mostly reexports and shipments to Puerto Rico.
- ⁸ Transfer to sugar containing products for reexport, for nonedible alcohol, and feed.

⁹ Residual.

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FARM NOTES By Dr. Charley Richard CONTACT COMMITTEE – NEW VARIETY, LCP 86-454 RISING COST OF ASULOX AND FERTILIZER – CROP REPORT PARISH FIELD DAYS

The annual meeting of the League's Contact Committee will be held on June 29. 1994 in Thibodaux, La. The meeting will center around the new variety to be released this year and mechanization research conducted through the Dedicated Research Program. Beginning at 9:00 a.m., prior to the indoor meeting, there will be a field tour of the plots that were planted with various mechanical planters last fall on the Hebert Bros. Farm. Many growers observed the machines planting cane last September and came away with their own opinions of what each machine accomplished. As growers are aware, much data was taken with regards to the performance of each machine. However, the real test of the machines consists of the stands that are present this spring and the vields that will result. League Agronomists. Windell Jackson and Herman Waguespack, Jr., along with Mr. Dalton Landry, have marked off various skips and have made stalk counts in each plot. This data will be available at the test site and will allow you to compare for yourself the job done by each machine. In the event of wet weather, slides of the plots will be shown at the Howard Johnson Motor Lodge in Thibodaux where the indoor program will be held. You may wish to call the League Office that morning if you have any questions concerning the field tour.

The official Contact Committee Meeting will begin at 10:00 a.m. The agenda will consist of the remainder of the data on the mechanical planter tests, data on harvesters collected over the last two years, and other mechanization data including cultural practices. Additionally, the new variety to be released this year, LCP 86-454 will be discussed. The agenda, including the field tour prior to the indoor meeting promises to deliver information that all of you have asked about — mechanization. There will be ample time for discussion of the data and on the League's expenditures for research including planter, harvester, and cultural practices efforts. Commissioner of Agriculture and Forestry, Bob Odom, will also address the participants.

The Contact Committee Meeting will adjourn around 12:00 noon. The League will provide a lunch for all present with the monthly meeting of the Board of Directors following immediately after lunch. All industry members are encouraged to attend the Contact Committee Meeting, the lunch, and Board meeting that will follow. On the agenda for the Board meeting will be the normal committee reports including any up to date information on legislative matters that can affect our industry.

NEW VARIETY, LCP 86-454

On April 21, 1994, the League's Variety Release Committee met and voted to release LCP 86-454 to the industry. Seed cane of this variety will be available to the industry this fall and application forms will be found in the next issue of the Bulletin. At the release meeting, much discussion was held concerning the potential of this variety. It was finally decided that this would be a variety that would occupy only special acreage because of the problems associated with the cane. The variety has yielded comparable to check varieties

(Continued on page 16)

THE SUGAR BULLETIN

RSD: Still the Most Important Sugarcane Disease in Louisiana

By J. W. Hoy, K. E. Damann, M. P. Grisham, and C. A. Hollier *

Ratoon stunting disease, RSD, has been and continues to be one of the major factors that limits yields and profitability of the Louisiana sugarcane industry. This continues to be the situation despite the fact that RSD can be controlled by a "clean seed" program. The reasons why RSD is such a difficult problem are the subject of this article.

RSD is caused by a bacterium that lives in the water-conducting vessels in sugarcane stalks, leaves and roots. As populations of bacteria build-up during the season, water flow in the stalks is reduced, and plant growth may be stunted. The stunting caused by RSD is worse under stress conditions, and it typically becomes more severe in the stubble crops. Cane that is heavilyinfected with RSD often will not provide an economic second stubble crop. In addition, the stubble of RSD-infected cane suffers greater damage when severe winter freezes occur.

Most disease problems have been managed through breeding for resistant varieties. This has not been the case with RSD. In fact, two of the most recently released varieties, LCP 82-89 and LHo 83-153, are *more* susceptible than the varieties we have been growing. This also may be the case for LCP 85-384. Why are we going backward instead of making progress? This was a very good question asked by someone on the 1993 St. Gabriel Field Day Tour.

Immunity to RSD appears not to exist in sugarcane. All varieties are susceptible to infection, but there is variability in the degree of susceptibility. It appears that some sources of resistance exist. However, the explanation or nature of resistance and whether it is a heritable trait that can be bred for are still unanswered questions. The only thing that we have traditionally done is to try to measure and compare vield losses between commercial and advanced experimental varieties. This is a very involved process, and as a result, we are only beginning to get an estimate of susceptibility (potential yield loss) by the time a variety is released.

Developing varieties resistant to RSD is a desirable goal; however, assuming it becomes possible, an argument can be made against it. Developing agronomically superior varieties that are resistant to smut has placed a major constraint on the breeding program during the last decade. Now we are going to have to select for resistance to leaf scald. Breeding for resistance to RSD would place yet another constraint on the variety selection program. If we eliminate RSD susceptible clones from the program, it will become even more difficult to come up with improved varieties. We are currently developing new, superior varieties in a system that is relatively free of RSD. We are then (Continued on page 22)

Jeff Hoy and Ken Damann are plant pathologists with the Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge; Mike Grisham is a plant pathologist with the USDA-Agricultural Research Service, Sugarcane Research Unit, Houma; and Clayton Hollier is a pathology specialist with the Louisiana Cooperative Extension Service, Louisiana State University Agricultural Center, Baton Rouge.

THE BATON ROUGE LINE By Tom and Linda Spradley

The regular legislative session that convened April 25 is now well underway. To the surprise of many, this session has remained within the restrictions of the "fiscal only" session as set forth in the constitutional amendment that was passed by the public last fall. In even years, there will be a "fiscal only" session; in odd years a "regular" session where fiscal matters cannot be discussed. As provided for in the amendment, this session is limited to:

> "legislation which provides for enactment of a general appropriation bill, implementation of a capital budget, for making an appropriation, levying or authorizing a new tax, increasing an existing tax, legislating with regards to tax exemptions, exclusions, deductions, reductions, repeal, or credits, or issuing bonds."

Article III, Section 2 Louisiana Constitution of 1974

As a result, about 40 percent of the bills originally filed will not receive a hearing and have been "returned to the calendar", where they will remain until the end of the session. While this is good news for the fiscal session, and reflects the desire of the people, it is



most certainly bad news for the special session (or sessions) that are yet to be called where most of these issues will resurface. One of the negative aspects of holding "fiscal only" sessions every other year is that it puts more control in the governor's hands because he is the only one who can call a special session (with the exception of a rather involved process initiated by the Legislature. The governor needs only to give five days notice of said session, and dictates what will be allowed in that session.

We are now past the deadline for filing bills (May 4) and appear to be on a course headed for adjournment of this session prior to Memorial Day weekend. The House has passed both the appropriation bill and the capital outlay (construction) bill - the major pieces of legislation for this session - on to the Senate. The House Ways and Means Committee began hearing tax bills this week and will continue to do so next week. The Senate has been grappling in committee with the appropriation bill for the past week and will continue to work on it next week, when capital outlay is also expected to be heard in committee.

WEIGHT LIMITS BILL

The bill regarding weight limits on cane trucks that we discussed in last month's column was judged by the Speaker of the House to be outside the confines of this "fiscal only" session. As a result, League floor leaders in the Legislature, Senator Mike Foster and Representative Sydnie Mae Durand, will ask the Governor to include it in the call for the special session.

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Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

New Rules on Chemical Accident Prevention

In the December 1992 issue of The Sugar Bulletin, readers were informed about U.S. Department of Labor (OSHA) rules on "Process Safety Management (PSM)" intended to impose strict controls on industries using or processing hazardous chemicals such as flammable gases, flammable liquids stored under pressure, and more than a hundred toxic or reactive materials including anhydrous ammonia and chlorine. Sugar mills having 10,000 pounds or more of anhydrous ammonia, propane or butane in storage, or more than 1,500 pounds of chlorine, are required to comply with OSHA's PSM rules. The primary emphasis of OSHA rules is on protecting employees exposed in the workplace.

The Federal Law authorizing OSHA to promulgate PSM rules also directed the U.S. Environmental Protection Agency (EPA) to promulgate similar rules in order to protect the general public possibly at risk if any of the regulated hazardous materials are released. Enforcement of such Federal



air pollution control regulations in Louisiana is accomplished through the Louisiana Department of Environmental Quality (LDEQ) which has been delegated authority by EPA under provisions of the Federal Clean Air Act. On April 20, 1994, the Air Quality Division of LDEQ promulgated rules intended to fulfill EPAs responsibilities under PSM, and these rules are labeled "Chemical Accident Prevention and Fees."

The new State of Louisiana (LDEQ) rules on PSM are no more onerous than OSHA's PSM rules, but do require that each affected facility be registered with LDEQ and pay an annual fee of \$200.00. However, there are some differences between OSHA and LDEQ rules in regard to scope of coverage. For instance, LDEQ rules apply only to 2,500 pounds or more of chlorine in storage, which would exempt a sugar mill having only one 1 ton cylinder of chlorine on the premises. whereas OSHA rules limit an exempted mill from having more than nine 150-pound cylinders of chlorine on-site. Furthermore, the LDEQ rule also exempts minor sources emitting less than 100 tons per year of a priority pollutant such as NO_x.

The simplest procedure for sugar mills to achieve compliance with both sets of PSM rules is to ascertain that less than de-minimus amounts of hazardous chemicals are on the premises at any one time. Ammonia storage tanks located or relocated at farms must, however, comply with Federal Regulation 29 CFR 1910.111(a) and (b).

IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

DEVELOPMENTS IN ENERGY UTILIZATION

Last month's article dealt with some general aspects of power generation at the cane factory. The emphasis was on the scale of operation and the quantities of cane, or biomass, required for a reasonably sized operation. For sugar processors, the other side of the coin on energy matters is to minimize energy use in process. Although the process energy requirements are quite difficult for cane sugar refineries, beet factories, and cane factories, there are many common features and the cane industry has much to learn with regard to energy conservation.

Several recent reports and the programs for some forthcoming conferences all deal with energy issues. Approaches to the minimization of energy use were the focal points of some papers presented at last weeks meeting of Sugar Industry Technologists (S.I.T.) in Hawaii. There will be a conference on energy aspects of cane processing in Guatemala in June and an I.S.S.C.T. workshop on the same subject in India this November. Last, and initially most intriguing, is a report on a system for recovery of much of the energy lost in flue gas and condensate at the mills.

In the cane sugar mill, the bagasse should provide sufficient energy for operations and the purpose of the traditional process design is to balance prime mover and process steam demands and to avoid use of external fuel. Bagasse is a relatively poor fuel, but there is usually an adequate supply. In many areas, electric power is the limiting factor in economic development and the cane industry can be a major provider. However, we must be careful not to let the tail wag the dog. Efficient sugar production must be the prime goal, but if this can be combined with the sale of surplus energy, then all will benefit. Circumstances vary widely and the high capital investments for electric power generation may be difficult to justify, particularly when the operating season is short and there is efficient production of power by local utilities. Both of these apply in Louisiana, but we must remember that while technology improves, economics can go in both directions. If we do not develop the technology, we cannot make use of it when the economic circumstances change. It may be appropriate to use technology developed elsewhere, but we cannot rely on this.

Energy conservation was the subject of several papers at the S.I.T. meeting. Beet sugar producers and cane sugar refiners purchase their energy, either as fuel or electric power. It is possible to substitute electric power for process steam, and the benefits of so doing derive from the much more efficient operation of large condensing turbogenerators. One paper discussed the use of electricity driven reverse oshosis systems for concentration of dilute streams in the molasses desugarization process. Another paper described the installation of mechanical recompression systems for continuous vacuum pan

(Continued on page 28)

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FARM NOTES (Continued from page 8)

in the experimental test plots. The strong points of the cane are its disease resistance (smut and leaf scald) and borer resistance. Its main problem centers around how it makes its tonnage vield. It has produced large stalks with low stalk populations in the tests that have been harvested as part of the Louisiana Variety Development Program conducted cooperatively by LSU, USDA, and the League. In the League's seed increase program, the seed acreage that is available for distribution is reduced from that of other recent releases because it does not increase as rapidly due to its low population.

If the variety is to be used, then it should be in areas where borer and



disease resistance are important, such as areas that cannot be sprayed by airplane or helicopter. However, because of its low population, it cannot be used in areas where grass pressure could be a problem. With the rising costs of herbicides (especially Asulox) and new environmental concerns with pesticide usage, the areas where this cane could be important may be extremely limited. Growers should be very careful about using this variety if they hope to keep grass under control. It has often been said that the best weed control is a good stand of cane and this variety has had populations as low as 16,000 millable stalks per acre. Also, due to its low population and subsequent planting ratio, the cane will not be readily suited to mechanical planting.

RISING COST OF ASULOX AND FERTILIZER

The price of Asulox has been increased again this year. Two years ago this author and others met with representatives of Rhone Poulenc, manufacturer of Asulox, concerning a

(Continued on page 17)

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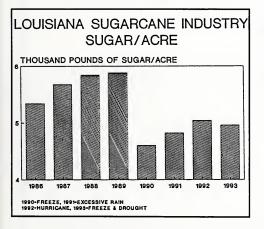
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ANE

FARM NOTES (Continued from page 16)

proposed price increase. Following discussions concerning the effects that the 1989 freeze and the floods of 1991 had on yields, the company decided not to increase the price as much as what had been planned. Instead, the company offered a rebate during the last year. This year there is no rebate, just a price increase of more than 10%. The League has written to the company complaining about the price. The company sent back information which lists the reasons for the price increase as re-registration under EPA regulations and the cost of research to improve the effectiveness of Asulox. Our concern is that no matter what the reason, you, as growers, cannot afford to pay more for any chemical or fertilizer with the price of sugar that you have been getting. The squeeze has been difficult for many of you and impossible for some growers. The accompanying graph shows the yield of cane per acre that the industry has produced for the last eight years. It is quite obvious that when increased costs and



fixed sugar prices are laid on top of the yields of the last four years, the squeeze puts many growers in serious trouble. The League is aware of the financial pinch that many of you are in and is attempting to do anything that can be done to help you with these problems.

Many of you complained bitterly about the rising cost of anhydrous ammonia that was experienced this spring. Charlie Melancon, League President expressed these concerns to members of the state legislature and convinced them to call a legislative hearing concerning the price. Kenneth Peltier, Chairman of the League's State Legislative Committee, provided testimony on behalf of the League. The hearing was well attended by many of you, some of who gave testimony concerning the price increase. Most notable were Wilson Viator, Jr. of Youngsville and Jessie Breaux of Franklin. Many thanks to those who attended. The end result was a resolution by the joint legislative committee to have the Federal Trade Commission look into the price increases to make sure that everything was legal.

CROP REPORT

In the last issue of the Sugar Bulletin, the crop report was less than optimistic. Not much has occurred to increase the crop expectations for 1994. With the large amount of old stubble that was being prepared for cultivation this spring, in order to avoid a major

(Continued on page 18)



FARM NOTES (Continued from page 17)

replanting, it is unlikely that above average yields can be achieved. The general areas of concern are fields that came up to a good stand in the fall but have not germinated well this spring. This involves stubble cane as well as plant cane. There are also some bad stands of late planted or late harvested cane, especially in black land. The variety that appears to be most affected is CP 65-357. This is the oldest variety that is currently being grown and is well past the period of time that most varieties normally give out. It may be that the "old horse" has finally given up. It has been a good horse and has carried much of this industry for many years. The industry should be careful not to ride it too long and get hurt by its faltering yields. Variety recommendations this year will be especially tricky as some growers move out of this variety and attempt to find replacements for this acreage.

It is hoped May will continue to be drier than normal as this will help tillering which is badly needed in many fields. Better tillering could improve the predictions for this crop, which at this time are no better than average.

PARISH FIELD DAYS

The Louisiana Cooperative Extension Service conducts field days throughout most of the sugarcane producing parishes of Louisiana during the summer months. A schedule of these meetings follows. It is important that you constantly upgrade your awareness of current sugarcane research in an effort to be as efficient as possible. The margin level between profit and loss is often small and you should take advantage of every opportunity to utilize those practices which can help you turn a profit.

(Continued on page 19)

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FARM NOTES (Continued from page 18)

Two of the parish field days (Terrebonne and Iberville) are held on experiment station properties and offer a unique opportunity to see not only demonstration plots but also actual research plots. All industry members are encouraged to attend the field day in their own parish as well as those on experiment stations. It is important that we let researchers know the importance of their work and express to them the problems that are encountered on the farm.

At the time of this writing, May 16, Terrebonne Parish had already prepared its agenda of items to be discussed at the field day. The Field Day will be held earlier than normal, July 6 at the USDA Experiment Station Ardoyne Farm in Chacahoula. The program will begin with registration between 8:00 and 8:55 a.m. with USDA personnel there during registration to discuss various phases of the research program at Houma. The field tour beginning at 9:00 a.m. will have demonstrations and discussions on cultural practices. diseases, insects, weed control and cane quality.

1993 Calendar of Parish Sugarcane Field Days

July 5, 9:00 a.m. St. John Parish Sugarcane Grower Meeting, Parish Extension Office,

Edgard July 6, 8:00 a.m. Terrebonne Parish Sugarcane Meeting, USDA Ardoyne Farm, Chacahoula

July 20, 8:00 a.m. Area Field Day, St. Gabriel Research Station

July 21, 8:30 a.m. Lafourche Parish Sugarcane Field Day, Raceland Sugars, Raceland July 26, 2:00 p.m. Assumption Parish Field Day, Dupre-Landry Farm, Belle Rose

- July 28, 5:00 p.m. Iberia Parish Sugarcane Field Day, Ronald Hebert Farm, Jeanerette
- July 29, 2:00 p.m. St. Martin Parish Sugarcane Field Day, Levert-St. John Plantation, St. Martinville
- August 3, 4:00 p.m. St. Mary Parish Field Day, American Legion Hall, Franklin
- August 5 Ascension Parish Field Day
- August 11, 2:00 p.m. St. James Parish Field Day, Welcome Farm
- August 25

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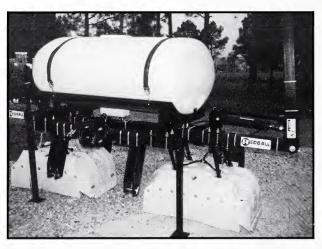
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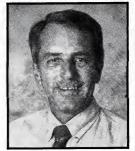
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RSD (Continued from page 9)

determining the susceptibility level of these varieties and informing the industry. Control of RSD is left up to the growers.

In theory, this should work. The problem is the nature of RSD. Because there are no visible symptoms, a grower does not know how much he has nor does he know when he is spreading it. This is a potential problem for the variety selection and variety release programs as well. With the current system, there is no guarantee that growers will receive new varieties from the American Sugar Cane League seed increase program free of RSD. It was documented that some seedcane of CP 76-331 was infected with RSD when released to the industry in 1984.

The research farms where selection of new varieties takes place are not free

of RSD. It is the responsibility of personnel in the variety selection program to see that clones going to off-station yield trails and entering the variety release program are free of RSD. We are reemphasizing RSD control to ensure that this is the case.

In the variety release program, a potential new variety is eventually increased on over 40 commercial farms. The program was developed to make it convenient and inexpensive to obtain seedcane of new varieties. Many growers assume new varieties are free of disease, but the American Sugar Cane League application form for seedcane of a new variety states: "there is no guarantee expressed or implied that this seed is free of mixtures, diseases, insects, weeds or weed seeds". Changes

(Continued on page 23)



RSD (Continued from page 22)

have been made to reduce the opportunities for RSD infection during the increase process, and limited sampling during 1993 did not detect RSD in seedcane sources of LCP 85-384. However, sampling for RSD is not routine, and to be safe, new varieties obtained from the variety release program should be heat-treated.

Tremendous resources and effort are devoted to developing new varieties. When a new variety is released to the industry, we have enough evidence to give us confidence that, under most conditions, it will be superior in one or more important characteristics to the current commercial varieties. The economic environment you must operate in is becoming ever more competitive. We can ill afford to have a promising new variety not perform up to its potential because it is infected with our most damaging pathogen.

This may be occurring with LCP 82-89. Growers have been increasing this variety and are now at the point where it is time to decide if it can help them or not. Many negative reports have come in on the performance of LCP 82-89. The sampling for RSD that has been done has shown high levels of infection in fields that are exhibiting poor growth.

Our inability to monitor RSD is a major reason whey this disease continues to be such a problem. An assay to detect RSD is badly needed; however, it has been very difficult to develop and make available a reliable assay. In Louisiana, we need to make decisions on which seedcane to plant before bacterial populations in the stalks have increased to readily detectable levels. An indirect assay was developed that detects the stress symptoms associated with infection. After extensive testing, it was shown that this assay was subject to false positives under some conditions. A direct assay that detects the pathogen also has been developed, and it is now available through some consulting firms. This assay is reliable in September, but it will miss some infections in August. Efforts continue to develop a reliable assay and make it available to assist growers in managing RSD.

A "clean seed" program has become more essential than ever. The new varieties are very susceptible to yield loss due to RSD. They will give superior yields only if they are kept free of RSD. The new varieties also may be susceptible to rapid spread of the disease. Research is in progress to determine if rate of disease spread and amount of yield loss are correlated.

Heat treatment and Kleentek[®] can both provide the basis for a "clean seed" program to control RSD. Economic analyses have indicated that both options will provide a high return on money invested. A single heat treatment will not completely control RSD. It will give a level of control of about 90% at best. Heat treatment also can be problematic. If you use this option, obtain a copy of the Louisiana Cooperative

(Continued on page 28)



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UP FRONT WITH THE LEAGUE

(Continued from page 4) provide some additional areas of consumptive use of sugar ranging from animal feeds to pharmaceutical uses.

Additionally, the Sugar Association has filed several suits and complaints with the Federal Trade Commissioner and other agencies concerning articles and advertisements that have slandered sugar with undocumented facts. The only bad news was since the discontinuation of the advertising program last year, sugar consumption in the United States, which had been showing a gradual but steady growth, experienced a decline. Like any other product, continual advertising is necessary to increase sales. No one can rest on their laurels, and I only hope that those in the sugar industry who withdrew from the program, causing its demise, will reconsider

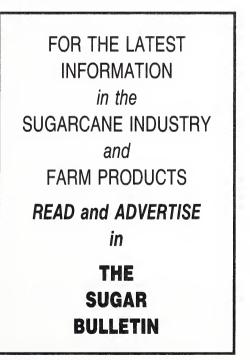
LOUISIANA BLACK BEAR

Last but not least, let me not forget about our infamous Louisiana Black Bear. As you are aware, there were two hearings scheduled, one of which was in New Iberia on Wednesday, May 11. I would like to thank the mill managers for making sure that the growers and the other interested parties in the sugar belt were aware of this hearing. I also would like to thank the growers who attended.

New Iberia High School's auditorium, which easily seats several hundred people, was filled with a standing-room-only crowd. The hearing lasted some five and a half hours, with approximately 50 speakers addressing the critical habitat designation. Of those who chose to speak for the designation, only seven spoke in favor of it, and those seven were from Baton Rouge, Covington, Gonzales, Lafayette, and other places that would not fall in the designated area.

Those people who favored the designation did not realize that the landowners and farmers throughout Louisiana have been the people responsible for helping revive the species in this state. What we are saying to these people is that the critical-habitat designation is not necessary for the survival of the species. It can be accomplished under present laws which prohibit the taking of black bear and with the continued support of the landowners and producers. This has already been demonstrated. It is not necessary for the U.S. Fish and Wildlife Service to go through an extreme to save the species. and to the extreme would be the implementation of the critical-habitat designation. We hope that the U.S. Fish and Wildlife Service will pay attention to what was said by the overwhelming majority at last week's hearing.

I hope that by the time you read this article all growers will have finished fertilizing and that the crop will be looking more promising.



IN THE FACTORY (Continued from page 13)

operation. The net flow of vapor to the condenser, and associated energy losses, were much reduced. A significant advantage of mechanical vapor recompression with continuous vacuum pans is that the system can operate under almost steady state conditions. Each case is different, and the low vapor pressure required to operate these stirred continuous pans makes the compression ratio lower.

The other paper dealt with energy requirements in the refinery and described changes designed to recover as much of the energy as possible from low pressure vapors and condensates. It was a partial application of "pinch" technology in which an attempt is made to balance all the heating and cooling requirements. I do not understand all the implications of this approach, but in this case, it did yield some significant advantages. For example, single stage evaporators may be advantageous if the vapors are used elsewhere. The vacuum pan evaporation rates, and therefore crystallization rates, were reduced if steam supply decreased. A priority sequence for steam supply to the pans was set by the operator. Difficulties can arise in construction of all the heat exchanges and pipework and the efficiencies calculated assume steady state operation.

The final topic involves the use of all the waste heat from the factory, including hot water discharge and flue gas, to heat a working fluid in a closed compressor/turbogenerator cycle. A steady supply of cool water is required and the energy recovered is based on the difference in temperature between the hot water (from a variation on a wet scrubber for the flue gas) and the available cooling water. An environmentally acceptable "freon" would be the working fluid. This technology has been applied to geothermal systems and the capital cost is high. Advantages for the cane industry include increased capture of the caloric value of bagasse 100 tons of bagasse at 50% moisture produces about 75 tons of water vapor in the stack gases which are not condensed under normal circumstances. This is not a simple technology, and it may not be practical to apply it to the cane industry. We are working with the developers of the technology to see where to go. More details as we progress.

RSD

(Continued from page 23)

Extension Service publication, "Controlling Ratoon Stunting Disease in Sugarcane", from your County Agent and follow the recommendations as closely as possible. The important thing is that "clean seed" sources need to be established *every* year to effectively control RSD. Infection of RSD-free cane can and will occur. Next month, we will publish an article entitled "Managing systemic sugarcane diseases with a clean seed program" that will cover all aspects of a "clean seed" program.

Solving the RSD problem could be crucial to the future well-being of the Louisiana sugarcane industry. RSD causes major losses, but those losses are not shared by everyone. Farms that have a *continuous* "clean seed" program and use good sanitation procedures do not suffer significant yield losses to RSD. At the present time, the only way to be "safe" from RSD is to assume that you have it and wage a continuous war against it.

THE SUGAR BULLETIN

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Vol. 72 - No. 10

JULY, 1994

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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UP FRONT WITH THE LEAGUE By Charles J. Melancon

I had served in the Legislature for several years prior to coming on board with the League. I have always attempted to maintain a realistic view of who I am, who I represented, and from where I came. I have always tried to keep in perspective the fact that my importance in Baton Rouge, particularly in the eyes of those that worked the halls of the Capital, was premised on my singular outstanding attribute; "the vote" that I had on all issues that came before the state Legislature. I have found with that experience that there are "friends," and then there are "friends." I guess the difference in the two friends is that some will be friends for the rest of my lifetime and some were friends because of the influence or the vote I possessed as a Legislator.

During that same time, I renewed a friendship with a gentleman that I knew in the 70's when he was a state employee and I was the Director of a **Regional Planning Commission.** It was a very casual relationship, but one of mutual respect, I believe, premised on the fact that I felt he had always been honest with me, and I with him. This particular person, during my tenure in the Legislature, was always available to me, as was his assistant. I found he and his staff to be very accommodating at any time I called. They were very cooperative and always willing to work for the best interest of the agricultural community that we both served.

Now that I am no longer in the Legislature and am involved directly with an agricultural organization, I viewed my position in the political arena as one of an outsider who would need to influence my former colleagues as I had been influenced during those years of which I spoke. However, I found that this particular individual, this statewide elected official and his first assistant were not one bit phased by the fact that I no longer had a vote in the Legislature, or that I no longer wheeled any authority in government. Bob Odom and his assistant, Bud Courson, are as cooperative, helpful, and as dedicated to the agricultural community now, as I perceived he was when I was a State Legislator. This article is not being written for the purpose of flattering the Commissioner and his department, but merely to tell you that because of people like him and his dedication to agriculture, my job has been made somewhat easier.

Some people may say that he was elected to do that job or that he gets paid for what he does; and that's ok. But, I can tell you that I know the amount of time that he spends "working" to protect and to help the agricultural community of Louisiana. His department was there to help us during the times when the EPA wanted to jerk the label on azinphos methyl, he was personally there meeting with members of Congress and the Secretary of Agriculture when it looked as though we might lose the Research Unit in Houma, he was supportive of our position on NAFTA even when all the other commodities were for NAFTA. He has been very diligent and helpful in dealing with the ad valorem taxation issue that we are presently attempting to resolve and has

(Continued on page 25)

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WASHINGTON UPDATE WITH DON WALLACE

GATT UPDATE

U.S. Trade Representative Mickey Kantor stated that President Clinton will expend "every energy" to ensure that legislation to implement the Uruguay Round world trade agreement is passed before the August congressional recess. However, the House Agriculture Committee continues to delay the "mock" markup of GATT implementation language. The "mock" markup is a page-by-page walk through of the implementation language with members and staff of the House Agriculture Committee. Currently the walk through is scheduled for June 28, 1994, and the committee markup is to be scheduled after the July recess.

No consensus has been reached regarding the GATT budget situation. Kantor also stated that the Administration is working on a bipartisan basis to pay for the GATT. It should be noted that the NAFTA payment situation was not resolved until about three weeks before Congress passed the NAFTA.

On May 25 the Canadian International Trade Minister Roy MacLaren said that U.S. and Canadian officials would meet in June for a two-day session in attempt to resolve the long disputed agricultural trade agreement involving wheat, barley, poultry, dairy products, peanut paste, eggs, and sugar. This meeting would bring together Kantor, MacLaren, U.S. Agriculture Secretary Mike Espy, and Canadian Agricultural Minister Ralph Goodale. The meeting has been scheduled for June 27 in Chicago.

AGRICULTURE APPROPRIATIONS BILL MARKED UP

On May 26, the House Agriculture Appropriations Subcommittee approved a \$67.8 billion agriculture appropriations bill for fiscal year 1995. The total amount is approximately \$4 billion less than appropriated in 1994. The majority of funding goes toward mandatory spending programs such as food stamps and the Women, Infants and Children feeding program. Discretionary spending took a heavy hit receiving \$13.2 billion in budget authority — a cut of more than \$1 billion from last year.

The subcommittee also increased the Wetlands Reserve Program by \$26.5 million. The administration had requested a \$174 million increase.

Five Agricultural Research Service (ARS) stations were funded in the subcommittee markup including Houma, Louisiana. The Administration had proposed that 19 stations be closed to create budgetary savings.

Full Appropriations Committee markup was June 9, the House of Representatives are expected to begin debate on the floor in late June.

U.S. SUGAR PRODUCTION ESTIMATES

The U.S. sugar production in fiscal year 1994/95 is projected at 7.67 million short tons, raw value, unchanged from last month, but up 2.1 percent from 1993/94. Sugar deliveries in 1994/95 are projected to increase 1.4 percent.

Beet sugar production for fiscal year 1993/94 is revised to 4.05 million tons, down 50,000 tons from the previous estimate based on the crop year estimate. Beginning stocks from fiscal year 1993/94 are revised downward 54,000 tons due to a correction in stocks data reported to USDA. Ending stocks are also reduced, lowering the forecast September 30, 1994, stocks-to-use ratio to 12.5 percent.

(Continued on page 22)

Louisiana Agricultural Experiment Station Louisiana State University Agricultural Center Baton Rouge, Louisiana 70803 and

United States Department of Agriculture Agricultural Research Service Washington, D.C. 20250 and

American Sugar Cane League of the U.S.A., Inc. Thibodaux, Louisiana 70301

Notice of Release of Sugarcane Variety LCP 86-454

The Louisiana Agricultural Experiment Station of the Louisiana State University Agricultural Center, the Agricultural Research Service of the United States Department of Agriculture and the American Sugar Cane League of the U.S.A., Inc., working cooperatively to improve sugarcane varieties, have jointly developed and hereby announce the release of a new variety, **LCP 86-454**, for commercial planting in the fall of 1994.

LCP 86-454 was selected from progeny of the cross CP 77-310 X CP 69-380. Results from 89 replicated trials over 7 years and 19 test locations indicate that the yield of sugar and cane per acre of LCP 86-454 are comparable to CP 65-357, CP 70-321 and CP 74-383. The variety produces low stalk populations. The stalk number per acre is less than that of CP 70-321 in plant cane and similar in stubble crops. The stalks of LCP 86-454 are larger in diameter and greater in weight than those of the check varieties in all crops. The recoverable sugar content of the variety is similar to CP 65-357 and has a milling factor of 1.035 and a cane fiber content of 12.6%. The variety is suited to mechanical harvesting, with harvesting characteristics similar to CP 72-370 and CP 74-383.

LCP 86-454 is resistant to injury caused by the sugarcane borer, *Diatraea saccharalis* (F.), is resistant to smut (*Utilago scitaminea* Syd. & P. Syd.), moderately resistant to leaf scald (*Xanthomonas albilineans*), susceptible to the sugarcane mosaic virus and susceptible to ratoon stunting disease (*Clavibacter xyli* subsp. *xyli*). Preliminary data suggest that the variety is tolerant to herbicides used in sugarcane production.

Seed cane will be distributed by the American Sugar Cane League in accordance with procedures to be announced to all sugarcane growers in Louisiana on or after June 29, 1994. Inquires concerning seed cane should be directed to the American Sugar Cane League, 206 E. Bayou Rd., Thibodaux, LA 70301. The Louisiana Agricultural Experiment Station and the United States Department of Agriculture do not have seed cane available for distribution.

Each agency will make such news releases as considered appropriate.

K. S. Tipton Director, Louisiana Agricultural Experiment Station Howard J. Brooks Administrator, Agricultural Research Service Branan B. Beyt Chairman of the Board, American Sugar Cane League of the U.S.A., Inc.

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FARM NOTES By Dr. Charley Richard NEW VARIETY DISTRIBUTION AND DATA - CLEAN SEED

Elsewhere in this issue of the Sugar Bulletin is the Notice of Release, List of Seed Cane Stations, and Seed Cane Application Form for LCP 86-454. In the June issue of the Sugar Bulletin, this author discussed the data concerning this variety. Growers are reminded that this variety is a low population, high stalk weight variety and that problems with weed control may result if grown in areas that have any degree of weed pressure. Use of this variety should be limited to areas that are free of weed pressure. Additionally, with a low stalk population, the planting ratio probably will not allow this variety to be mechanically planted. Because of the low planting ratio, there is not as much seed cane available on secondary stations as is normally sold for varieties with a more normal planting ratio.

Beginning on page 16 of this issue of the Sugar Bulletin can be found the 1993 outfield results which present the yields of LCP 86-454 along with other experimental varieties as compared to several commercial varieties. A simpler report format has been used this year to incorporate suggestions given to us by industry members. Hopefully, this will make reading these variety results easier for our members.

Last year, two varieties (LCP 85-384 and HoCP 85-845) were released to the industry. However, seed cane of only LCP 85-384 was distributed in the fall. No seed of HoCP 85-845 was distributed because leaf scald, a new disease to Louisiana, was detected at numerous secondary stations. It was stated that a decision would be made during 1994 as to whether HoCP 85-845 would be distributed this fall. At the present time, leaf scald symptoms again are appearing in

a number of secondary stations. Because of the inconsistency of these symptoms among secondary stations and because little is yet known with regards to the impact that leaf scald will have on cane yields, it has been decided that the League will again not distribute this variety. It is felt that any widespread distribution of this variety across the cane belt could potentially spread the disease to all areas. We realize that the industry cannot afford to take chances with a disease that has potential to hurt vields and one that so little is known about because of its newness to the industry. It is felt that some precaution at this time is in the best interest of the industry.

CLEAN SEED

Beginning on page 19 of this issue of the Sugar Bulletin is an article by the sugarcane pathologists at LSU and USDA concerning the clean seed program that you as growers should be using on your farms to improve your overall efficiency. It is a very important article; although it is a bit long and detailed, it is important that you read the entire article and understand the significance of using a clean seed program on your farm. It is vital that you understand this article - if you have problems with some of the details, call one of the pathologists and have them go through the program. Clean seed should be an important aspect of your production system. If it isn't then you cannot claim to be an efficient producer.

The League has always been a strong advocate of the use of clean seed. Changes have been made to its seed

(Continued on page 26)

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LIST OF STATIONS WHERE LCP 86-454 IS AVAILABLE

The American Sugar Cane League has been directed by the Louisiana Agricultural Experiment Station and the U.S. Department of Agriculture to undertake a fair and impartial distribution of the newly released variety of cane known as LCP 86-454.

It has been grown with the understanding that those growing LCP 86-454 shall be paid the price of mill cane plus a bonus, and the League is authorized by the Louisiana Agricultural Experiment Station and the U. S. Department of Agriculture to charge a distribution fee of \$1.00 per ton.

If you wish to order seed cane of this new variety, please fill out the application form found in this issue of THE SUGAR BULLETIN. NO OTHER FORM OF APPLICATION WILL BE ACCEPTED AND IT MUST BE RECEIVED AT THE OFFICE OF THE AMERICAN SUGAR CANE LEAGUE, P. O. DRAWER 938, THIBODAUX, LA 70302, NO LATER THAN FRIDAY, AUGUST 12, 1994.

The price of this seed cane is **\$36.00** per ton, cut and loaded on your vehicle at the secondary station. The cane will be cut with a mechanical harvester. There is no guarantee, expressed or implied, that the seed offered is free of mixtures, diseases, insects, weeds or weed seeds.

For the convenience of delivering and handling LCP 86-454, the League is requesting purchasers to name three secondary stations from which they are willing to receive cane. The League will attempt to fill all orders from one of the three selected secondary stations. If this is not possible, the order will be filled from the nearest secondary station. If only one secondary station is named and the order cannot be filled from that station, then the order will be filled from a secondary station selected by the League.

On August 12, 1994, all seed will be allocated and there will be no switching of secondary stations.

Parish	Station	Operator
Ascension	Evan Hall New Hope	Churchill & Thibaut Triple M Farms
Assumption	Belle Alliance Cedar Grove Glenwood Little Texas Lula Goldmine Westfield	Churchill & Thibaut E.G. Robichaux Thibaut Farms Donald Peltier Savoie Farms Thibodeaux Bros. Dugas & LeBlanc
Avoyelles	Newton Farms	Blake Newton
Iberia	Caroline Enterprise Lawrence Dugas Farms Ronald Hebert Farms Ulysee Gonsoulin	Herman Walet M.A. Patout & Son Lawrence Dugas Ronald Hebert, Sr. Ronald Gonsoulin (Continued on page 11)

The secondary stations possessing LCP 86-454 are:

THE SUGAR BULLETIN

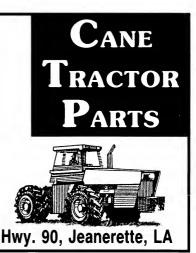
LIST OF STATIONS (Continued from page 10)

Parish	Station	Operator
Iberville	Cannonburg Frank Pearce & Sons St. Louis	Ross Campesi, Jr. Frank Pearce & Sons St. Louis Planting
Lafayette	Triple V Farm	Daniel Viator
Lafourche	Leighton Raceland McLeod	Godfrey Knight Raceland Sugars Valentine Sugars
Pointe Coupee	Alma	Alma Pltg. Co.
St. James	Blackberry Graugnard Farms Martin & Poche	Blackberry Farms Graugnard Farms Martin & Poche
St. John	Glendale	T. Lanaux & Sons
St. Martin	B & T Farms Comb Farms Huey Dugas Farms Levert St. John	Dane Berard Jackie Comb Huey Dugas Levert St. John
St. Mary	Allain Breaux Bros. Frank Martin Farms Northside Pltg. Co. Ralph Longman	A.V. Allain & Sons Herbert Breaux Robert Judice Jackie, Clint & Chad Judice Palab Lengman
	Freyou Farms Champagne Farms	Ralph Longman Glenn & Wayne Freyou Mike Champagne
Terrebonne	Magnolia	Daniel Naquin
Vermillion	Edward Zenon Farm Sam Duplantis	Edward Zenon Sam Duplantis
West Baton Rouge	Allendale	Allendale Farms

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THE BATON ROUGE LINE By Tom and Linda Spradley

"FISCAL-ONLY" SESSION

The first "fiscal only" session adjourned May 25 to mixed reviews. Some called it a total bust because too many issues were excluded, necessitating at least one more special session. Others have labeled it a step in the right direction.

We tend to lean towards the latter view. The fiscal only nature of the session did enable the Legislature to focus more time and energy on fiscal matters — probably not enough, but it was an improvement. Those who expected changes overnight were bound to be disappointed. To effect total change will not only take time but most likely will require changes in the manner in which the Legislature conducts its business.

One positive aspect overlooked by most in evaluating the session is the increased amount of time and energy allowed to *us* (and other business lobbyists) to focus on issues important to *you*. While the session moved very quickly, we still had more time than in the past to work on issues without various and sundry other matters interfering in the process.

The argument about the restrictive fiscal session requiring that the Legislature be in special session constantly is a weak one. While we are now embarking on our third special session of the year, at the end of June the Legislature still will have been in session fewer days than under the old system. A downside to the new process remains, however, in that more power rests in the hands of the Governor since he is the one who calls the special sessions and determines their content. Following are the key bills we followed for the League, and their final status:

HB 66 (Theriot, Steve) and SB 2 (Foster) — Constitutional amendment that would prevent the Legislature from using the Louisiana Recovery District, or any similar device, from raising taxes without support of two-thirds vote of the Legislature. Last year, the Legislature gave the Recovery District the "authority" to suspend exemptions on the fourth penny of the state sales tax. Because the Legislature did not actually vote on the tax, (tax votes require a two-thirds vote) but simply granted the "authority", only a majority vote was required. SB 2 has been enrolled.

HB 209 (Rep. Holden) — This bill would have made it more difficult to obtain or repeal outright the exclusion of pollution control devices from the state sales and use tax. This bill was amended in committee but failed to pass on the House floor.

HB 259 (Theriot, Steve) — This bill would have allowed sales tax to be charged on all computer software purchases whether "canned" or customized and whether obtained "off the shelf" or transferred by modem. This bill has been turned into a study resolution.

SB 3 (Johnson) — Constitutional amendment that would have reinstated the millage (of which business pays 98 percent) that can be levied by a political subdivision without a vote of the people. This bill passed out of committee but was eventually withdrawn.

SB 4 (Johnson) – A constitutional

(Continued on page 28)

THE SUGAR BULLETIN

THE LAST DAY ON WHICH APPLICATIONS FOR SEED CANE OF LCP 86-454 CAN BE ACCEPTED IS AUGUST 12, 1994

The cane will cost \$36.00 per ton. The League will keep \$1.00 per ton and give the rest to the Secondary Stations. The League will make every effort to fill orders at locations selected by applicants.

Please be informed that some locations may be short on seed. It is important that you fill out the application completely (first, second, and third choices) so that we might provide you with the best service.

Tear Off Application Below and Mail

APPLICATION FOR LCP 86-454 SEED CANE

Date _____

TO: American Sugar Cane League of the U.S.A., Inc. P. O. Drawer 938, Thibodaux, LA 70302

Gentlemen:

I hereby apply for ______ tons of LCP 86-454 seed cane: I agree to pay when an allocation is assigned to me, and I am to be notified concerning this and supplied with the name and address of the grower from whom I am to get the cane, which I will send for on delivery dates in September or October, 1994. I understand that this cane will not be trash free.

If for any reason this order cannot be filled, it is understood that my money will be refunded to me.

My **1994** total acreage in cane for sugar and seed is ______ acres. The locations I wish to receive my allocation from are:

1st choice	
2nd choice	
Oud also is a	

3rd choice ______ This application is made with the full understanding on my part that it may not

be possible to get as much as I apply for, and that there is no guarantee expressed or implied that this seed is free of mixtures, diseases, insects, weeds or weed seeds.

My farm is located between these two towns: _____

and ______
PLEASE PRINT
Name ______
Mailing Address ______
City_____Zip_____
Phone # (Day) _____(Evening) ______
DO NOT SEND MONEY NOW



IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

ANALYTICAL MATTERS

Last month. I attended the twentyfirst Session of the International Commission for Uniform Methods of Sugar Analysis (ICUMSA). Essentially all major sugar producing and exporting countries are part of this organization which attempts to standardize the analytical methods used in the sugar industry. ICUMSA methods cannot be legally required, but are often incorporated into commercial contracts since they have been tested properly and meet the international requirements for establishment of validity.

Since so much money is involved in the buying and selling of sugar, it is very desirable that the buyers and sellers agree on how the analyses are performed, especially those which have a direct impact on sugar quality, and therefore, value. Consequently, there is much discussion (often heated) if a modification/improvement in a method is perceived as giving an advantage to a buyer or seller. For example, if modified procedures result in slightly higher values for pol and color in raw sugar, assuming that the same contract data applies, the raw sugar producers would benefit from the former (pol) and the refiners would benefit from the latter (color). The intrinsic quality or refinability of the sugar has not changed but the data used to assess a monetary value for the sugar has changed.

ICUMSA is a world-wide body which brings together the activities of the National Committees for sugar analysis in more than thirty countries. One hundred and twenty five delegates from

thirty-three countries and organizations were present. The technical work of ICUMSA and the National Committees is divided into General Subjects which cover the main area of interest for cane, beet and refinery operations. For example, General Subject 1 deals with raw sugar, General Subject 4 with molasses and General Subject 5 with cane. The analytical methods appropriate to a subject are worked on by those involved, under the coordination of the national or international referees. There is, of course, some overlap in methods and collaboration between the referees is necessary. Supporting the General Subjects are the Technical Subjects where specific methodologies are involved and these may be important for several General Subjects. For example, Technical Subject 4 deals with polarimetry and quartz plates and Technical Subject 7 with color, reflectance and turbidity. These are well established technical areas for the sugar industry and newer Technical Subjects have been introduced dealing with chromatographic and enzymatic and immunological procedures. A new "Methods Book" giving the details of all the various ICUMSA procedures and their status is now available and was part of the discussions at the meeting. Lead acetate is used in many of these long established procedures and work is planned before the next session (in 1998) to replace lead in all of them with a suitable alternative.

The format of the meetings and

(Continued on page 27)

A Report of the 1993 Outfield Variety Tests

Kenneth L. Quebedeaux, LAES Research Associate Donnie D. Garrison, USDA-ARS Agronomist Windell R. Jackson and Herman L. Waguespack, ASCL Agronomists

This article is prepared to inform the Louisiana sugarcane industry of the performance of prospective new varieties, as well as commercial varieties, developed through the Louisiana Sugarcane Variety program. In an effort to present the data in a timely and easily understood manner, an informal, rather than a technical format is used. If additional information on the procedures used for data collection and preparation is required, please refer to the publications listed at the end of this article.

Outfield variety testing is the final stage of a 12-year selection sequence of the Louisiana Sugarcane Variety Program. In 1993, 6 unreleased varieties in plant-cane, 2 in first-stubble, and 1 in the second-stubble crop were compared to 8 commercial varieties. Agronomic characteristics of these varieties were evaluated at 13 locations (Table 1) cooperatively by the American Sugar Cane League, the United States Dept. of Agriculture, Agriculture Research Service, and the Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station. Field plots were located throughout the Louisiana sugarcane belt on sugarcane farms with representative soil types. In 1993, 21 light soil and 10 heavy soil tests (in plant and stubble crops) were mechanically harvested to obtain yield and harvestability data. The dates of planting and harvest for each outfield test location, as well as soil type and region, are presented in Table 1.

Yield data for all locations within a soil type and crop are reported in Tables 2 and 3. The most widely grown commercial variety in 1993, CP 70-321, is used as the standard for comparisons of yield among varieties. Statistical analyses of the data were used to determine if yields were significantly different from CP 70-321. It should be noted that although the results are presented by soil type, statistical analysis of the 1993 outfield data suggest that the relative yields of current varieties are not affected by soil type.

Of the unreleased varieties tested in 1993, only two varieties yielded significantly more sugar per acre than CP 70-321; CP 88-769 in plant-cane, on light soils, and LCP 86-454 in the firststubble crop, on heavy soils.

The two varieties released in 1993, LCP 85-384 and HoCP 85-845 yielded favorably when compared to the standard variety. Although HoCP 85-845 was generally higher in population, this variety was equal to CP 70-321 in sugar per acre. The stubble crops of LCP 85-384 were generally higher in sugar per acre than CP 70-321 due to significantly higher tonnage and populations.

Of the other commercial varieties tested in 1993, two varieties yielded significantly higher than CP 70-321 in sugar per acre on light soils; CP 72-370 in plant-cane and CP 79-318 in the firststubble crop. On heavy soils, LCP 82-89 and LHo 83-153 were significantly higher than CP 70-321 in sugar per acre in the first-stubble crop.

Outfield variety tests are harvested under a wide range of conditions, (weather, lodging, soil type, harvest equipment and operation, etc.). Field conditions and harvestability of (Continued on page 35)

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Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

Solid Waste Management at Sugar Mills, 1994 Season

The 1993 Revision of Louisiana's Solid Waste Regulations make a significant change in the way that muds and other residues from sugar cane processing are to be regulated. The new rules recognize that most residues from processing agricultural commodities, such as sugar cane, can be put to valuable use instead of being discarded or "wasted." Therefore, agricultural residues that are used constructively and in a way that does not cause environmental degradation, are exempt from most of the new rule's requirements that are applicable to "solid waste" and "industrial solid waste."

The so called "agricultural exemption" under the 1993 Rules applies to any residues associated with sugar mill operation that are handled according to a "Best Management Practices Plan (BMPP)" for each individual mill, provided that a mill's plan is approved in writing by the Louisiana Department of Agriculture and Forestry (LDAF). Mill residues not specifically covered by a BMPP, or residues covered but not managed in compliance with an LDAF approved plan, must comply with all applicable regulations of the Louisiana Department of Environmental Quality including those regarding permits, fees, and penalties. Garbage, trash and hazardous waste are not included in any "agricultural exemption" but if generated at a sugar mill would necessarily be provided for in that mill's BMPP.

On April 15, 1993, the American Sugar Cane League convened on ad hoc

committee to provide technical assistance and advice to the LDAF in formulating a management system for developing and approving adequate BMPPs for each sugar mill. The committee, working in coordination with LDAF's Office of Soil and Water Conservation, gathered information on the situation at each mill and identified management techniques that provide adequate environmental protection safeguards. The committee completed its work in April 1994, and a detailed report on the recommended BMPP management system was sent to LDAF. On May 9, 1994, the Office of Soil and Water Conservation mailed the document to LDEQ, implicitly adopting the BMPP management system as drafted.

The BMPP management system approved for sugar processors calls for submittal of a BMPP by each mill to LDAF before the 1994 milling season. The "system" package adopted by LDAF contains guidelines for preparing an individual mill BMPP but not an actual or prototype BMPP. A model BMPP intended to help mill operators in preparing their plans is being developed by the League, and is expected to be available in July 1994.

Those familiar with the situation understand that it will be difficult for most mills to have a perfect plan ready by October 1994, and not possible to acquire all the needed property, receive all the needed equipment, or have all needed construction completed for processing of the 1994 crop. Furthermore,

(Continued on page 39)

Managing Systemic Sugarcane Diseases With a ''Clean Seed'' Program

By J. W. Hoy, K. E. Damann, M. P. Grisham, and C. A. Hollier *

Most of the important diseases of sugarcane in Louisiana are caused by pathogens that are systemic in the plant. This means the pathogen can be found in most or all parts of the plant. The systemic diseases include ratoon stunting disease (RSD), smut, mosaic, and the new disease, leaf scald.

Systemic diseases can be transmitted through infected seedcane. Smut also is dispersed through the air in the form of microscopic spores produced on the "whip" that develops at the tip of infected shoots. The virus that causes mosaic can be spread from plant to plant by aphids. RSD and leaf scald can be transmitted mechanically by equipment, especially the harvester. In addition, leaf scald can be dispersed through the air to some extent in windblown rain.

Growing resistant varieties is the most desirable method for controlling diseases. The research agencies are working continuously to develop and release disease resistant varieties. However, it is easier to obtain resistance to some diseases than others. In addition, we have so many disease problems that it is difficult to come up with varieties with resistance to all diseases that are agronomically superior or even equal to varieties currently under cultivation.

Improvements in sugar yield and stubbling ability are the highest priorities of the breeding and variety selection programs. To get improvement in these traits, we often release varieties that have some degree of susceptibility to one or more diseases. This means that some disease problems must then be managed on the farm. As pointed out in the article published in the last issue of the **Sugar Bulletin**, control of our most important disease, RSD, is left completely up to the growers.

Diseases such as RSD and leaf scald, that are mainly transmitted mechanically and through infected seedcane, can be effectively controlled by what is known as a "clean seed" program. This program also can provide some control of smut and mosaic. Aerial spread of smut occurs mostly over short distances, so a clean seed program can keep infection levels low and allow moderately susceptible varieties to be grown without sustaining economic losses. It appears that a clean seed program may not provide adequate control of mosaic in highly susceptible varieties, but infection levels might be kept low in varieties with low to moderate susceptibility.

What is a clean seed program? It is a disease management program that consists of two parts. First, seedcane that is free of disease must be obtained. There are currently two options: heattreatment of cane grown on the farm or purchase of seedcane produced through micropropagation and sold under the *(Continued on page 30)*

^{*} Jeff Hoy and Ken Damann are plant pathologists with the Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge; Mike Grisham is a plant pathologist with the USDA-Agricultural Research Service, Sugarcane Research Unit, Houma; and Clayton Hollier is a pathology specialist with the Louisiana Cooperative Extension Service, Louisiana State University Agricultural Center, Baton Rouge.

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WASHINGTON UPDATE

(Continued from page 5)

WASDE-291-11

U.S. Sugar Supply and Use 1

Items	1992/93	1993/94	1994/95 Projections	
		Estimate	May	June
	1	,000 short to	ons, raw valu	e
Beginning stocks ²	1,450	1,673	1,322	1,218
Production ²	7,773	7,510	7,670	7,670
Beet sugar ³	4,392	4,050	4,300	4,300
Cane sugar ⁴	3,381	3,460	3,370	3,370
Imports ²	2,039	1,775	NA	NA
Under quota 5	1,335	1,125	NA	NA
Other ⁶	704	650	NA	NA
Total supply	11,262	10,958	NA	NA
Exports ² 7	486	590	540	540
Domestic deliveries ²	9,063	9,150	9,275	9,275
Domestic food use	8,900	9,015	9,100	9,100
Other ⁸	163	135	175	175
Miscellaneous ⁹	40	0	0	0
Use, total	9,589	9,740	· 9,815	9,815
Ending stocks ² ¹⁰	1,673	1,218	NA	NA
Stocks to use ratio	17.5	12.5	NA	NA

¹ Fiscal years beginning Oct. 1. Puerto Rico not included.

² Historical data are from ASCS, "Sweetener Market Data."

³ Forecast for 1994/95 is based on intended plantings in the March 31 "Prospective Plantings." Forecasts of percent of area harvested and beet yield are equal to 1989-93 averages excluding the high and low years. Sugar recovery from beets — excluding net additional sugar from desugarization of molasses — is the projected linear trend of 1982-93 recoveries. Net additional sugar from molasses is forecast at 235,000 STRV.

- ⁴ Forecast for 1994/95 is based on estimates of sugarcane area harvested for sugar in each state which reflect information from producers, processors, and other knowledgeable sources; and forecast sugarcane yields and sugar recovery from cane equal to the 1989-93 average excluding the high and low years for each state.
- ⁵ Actual arrivals under the tariff rate quota with late entries and quota overfills assigned to the fiscal year in which they actually arrived. Estimated imports under quota in 1993/94 assume a shortfall of 40,000 tons from the 2-year, 2.5 million STRV quota for 1992/93 and 1993/94. The quota for 1994/95 has not been announced.
- ⁶ Quota exempt imports (for reexport, for polyhydric alcohol, from Canada, and high-duty).
- ⁷ Mostly reexports and shipments to Puerto Rico.

⁸ Transfer to sugar containing products for reexport, for nonedible alcohol, and feed.

⁹ Residual.

¹⁰ Ending stocks for 1992/93 are lowered 54,000 tons to correct a reporting error.

CROP PRODUCTION REPORT

Sugarcane production for sugar in 1993 totaled 29.7 tons per acre, 3 percent above the 1992 output. The increase in production was the result of increase harvested acreage. The total acreage harvested was 893,300 acres, 3 percent above 1992. The average yield of 33.2 tons per acre was unchanged from 1992.

(Continued on page 23)

WASHINGTON UPDATE

The raw value of sugar production totaled 7.53 million tons, a 3 percent decrease from 1992. Beet sugar totaled (Continued from page 22)

4.05 million tons, down 8 percent from 1992 and accounted for 54 percent of the total raw sugar output.

SUGARCANE: AREA HARVESTED, YIELD, PRODUCTION, PRICE AND VALUE BY STATE AND UNITED STATES, 1992-93

	AREA HA	RVESTED	YIE	LD 1	PRODU	CTION 1
STATE	1992	1993 ²	1992	1993 ²	1992	1993 ²
For Sugar	1,000	ACRES	тс)NS	1,000	TONS
FL	426.0	425.0	33.2	34.1	14,143	14,512
н	61.7	64.8	88.0	85.0	5,430	5,508
LA	345.0	360.0	23.2	22.8	8,010	8,220
тх	37.7	43.5	34.2	32.5	1,290	1,412
US	870.4	893.3	33.2	33.2	28,873	29,652
For Seed						
FL	17.0	19.0	33.2	33.7	564	640
HI	6.2	5.1	31.0	19.2	192	98
LA	30.0	30.0	23.2	22.8	696	684
TX	1.6	0.9	23.8	30.0	38	27
US	54.8	55.0	27.2	26.3	1,490	1,449
For Sugar and Seed						
FL	443.0	444.0	33.2	34.1	14,707	15,152
HI	67.9	69.9	82.8	80.2	5,622	5,606
LA	375.0	390.0	23.2	22.8	8,706	8,904
тх	39.3	44.4	33.8	32.4	1,328	1,439
US	925.2	948.3	32.8	32.8	30,363	31,101
	For Sugar			For Sugar	and Seed	
	Price Per Ton		Value of Production		Value of Production ³	
	1992	1993 4	1992	1993 4	1992	1993 4
	Dollars			1,000	Dollars ——-	
FL	29.80		421,461		438,269	
ні	28.30		153,669		159,103	
LA	25.40		203,454		221,132	
ТΧ	25.40		32,766		33,731	
US	28.10		811,350		852,235	

¹ Yield and production refer to net weight.

² Revised.

³ Price per ton of cane for sugarcane used in evaluating value of production for seed.

⁴ Estimates not available. U.S. 1993 price and value will be published in "Agricultural Prices", July 29, 1994. State estimates will be published in "Crop Values", January 1995.

(Continued on page 24)

SUGAR, RAW AND REFINED: PRODUCTION AND YIELD BY CROP, STATE, AND UNITED STATES, 1992-93 *

		SUGAR, R	AW VALUE		Sugar	
STATE Production		uction	Yield Per Ton of Cane or Beets		Production Refined Basis	
	1992	1993 ¹	1992	1993 ¹	1992	1993 1
	1,000	ACRES	POL	INDS	1,000	TONS
Cane Sugar						
FL	1,710	1,770	242	244	1,598	1,654
HI	662	677	240	246	609	633
LA	876	890	219	217	819	832
тх	135	145	209	205	126	136
US	3,373	3,482	234	235	3,152	3,255
Beet Sugar						
US	4,386	4,047	301	308	4,099	3,792
Cane and Beet Sugar						
US	7,759	7,529			7,251	7,047

See page B-13 for program changes.

¹ Revised.

MOLASSES AND BEET PULP: PRODUCTION BY PRODUCT, STATE, AND UNITED STATES, 1992-93 ²

		Production		
Product and State	Unit	1992	1993 ¹	
Sugarcane Products Blackstrap Molasses-80 degree Brix ²		1,0	000	
FL HI 3 LA TX US	Gallon Gallon Gallon Gallon Gallon	93,686 34,710 43,895 9,377 181,668	98,632 36,020 49,395 10,200 194,247	
Edible Molasses LA US	Gallon Gallon	1,460 1,460	1,480 1,480	
Sugarbeet Products — US Molasses	Gallon	178,459	130,038	
Pulp Molasses Dried Wet	Ton Ton Ton	1,674 474 226	908 493 307	

* See page B-13 for program changes.

² Includes high-test molasses from frozen cane.
³ 85 degree Brix.

¹ Sugarcane products revised.

THE SUGAR BULLETIN

UP FRONT WITH THE LEAGUE

(Continued from page 3)

continually volunteered his support on many other occasions to your general manager.

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FARM NOTES (Continued from page 8)

cane program to incorporate the newest technologies so that the cleanest seed possible is used to begin the increase process. Much progress has been made with regards to mosaic resistance among the newer varieties. It is unfortunate that some of the newer varieties have shown more susceptibility or intolerance



to RSD than some older varieties. This is apparently showing up in the yields of these varieties as they are being grown commercially around the state. As a result, the League continues to evaluate its seed cane increase program. It is hoped that the Louisiana Breeding Program, conducted cooperatively by LSU, USDA and the League, can be improved to produce varieties with more resistance (if not tolerance) to some of the other diseases like RSD. This, coupled with a seed increase program that economically produces the cleanest seed practical to the industry, will give growers a good start in new varieties. Keeping it clean then becomes a management technique that will allow growers to produce these varieties efficiently.



IN THE FACTORY (Continued from page 15)

reports of ICUMSA follow the discussion of the various subjects and most of them involve little controversy. This is especially true of some of the Technical Subjects where only few countries have the resources and skilled personnel to do the work. An example of this is the necessity to establish the specifications for quartz plates to be used to calibrate polarimeters operating at high wavelengths. Only the German industry has the resources necessary and they will perform the studies for the world wide industry.

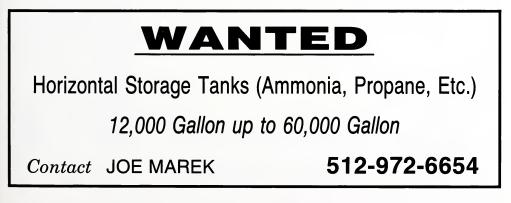
This brings me to a potentially confusing topic which is the use of the term "near infra-red (NIR)" since this is used loosely with both polarimetry and spectroscopy. High wavelength polarimetry better description than NIR (a polarimetry) is used with highly colored solutions and is well established and part of current raw sugar contracts. The only work remaining in this area is the establishment of the very precise values for the optical rotations of sucrose and quartz. In contract, NIR spectroscopy is a rapidly advancing area and we can expect considerable use of the technology in the future. Discussions at the meeting led to the general conclusion that, with our present knowledge of the system, it is appropriate for process control but not commercial transactions.

The measurement of color,

especially for raw sugar, is a subject where there was general dissatisfaction with the current and proposed procedures. In both cases the data presented were very unsatisfactory in terms of reproducibility between laboratories. An essential aspect of a method becoming officially accepted by ICUMSA is that rigorous interlaboratory analyses of samples be performed and that the statistical evaluation of the data meets certain standards for repeatability (in the same laboratory) and reproducibility (between laboratories). More work is necessary, especially on the method used to adjust the pH of the sugar solution to 7.0.

One of the matters that came up was the desirability of certification of laboratories as being competent to perform the analyses. I see this as a major (Continued on page 28)





IN THE FACTORY (Continued from page 27)

problem for most laboratories in raw sugar mills. In Europe, laboratory certification is required by some government and regional authorities. An example of the problems that can occur was shown when a collaborative study was made to compare the standard lead based system for raw sugar polarization with the newer high wavelength system which does not require any chemical clarification. Eight laboratories were involved but statistical analysis of all the data showed that only three were able to achieve the consistency required.

1996 is the centenary of ICUMSA and there is still much work to do. In some areas it may be almost impossible to achieve a really satisfactory analytical system. Also, new automated technologies may supercede the established practices and will require all the collaborative study necessary for their implementation.

THE BATON ROUGE LINE

(Continued from page 12) amendment requiring a two-thirds vote to enact exemptions or exclusions from local sales and use taxes and examptions or exclusions from state sales and use taxes. Currently, a simple majority is required to obtain an exemption or exclusion from a sales tax. Requiring a twothirds vote would make it more difficult to obtain an exemption or exclusion. This bill passed the Senate, but died on the House calendar.

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MANAGING SYSTEMIC SUGARCANE DISEASES (Continued from page 19)

brandname "Kleentek1". Second, measures must be taken to prevent reinfection during the increase of seedcane so that cane used to plant commercial fields will still be "clean". If pathogens are allowed to reinfect, disease can quickly return to original or higher levels, and the time and money invested in obtaining "clean seed" will have been wasted.

Yields of different varieties started with RSD-free seedcane obtained by heat treatment or from Kleentek have been generally equal for three-year crop cycles. However, there are differences between the two "clean seed" options that need to be considered. Heat treatment, even when done properly, will not completely control RSD. It may only provide approximately 90% control. Kleentek is free of RSD at the time of initial planting. Smut is completely controlled by heat treatment. Kleentek seedcane may become infected with smut during the increase process prior to sale to the growers; however, it is rogued, inspected by Louisiana Department of Agriculture and Forestry inspectors, and certified to contain less than one half of one percent smut infection. Sugarcane mosaic virus is not controlled by the heat treatment currently used for RSD control. Kleentek starts free of mosaic, infection by aphid transmission may occur during the increase process. Kleentek is rogued, inspected, and certified to contain less than five percent mosaic. Conventional heat treatment procedures will not control leaf scald. This disease was detected in

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(Continued on page 31)



MANAGING SYSTEMIC SUGARCANE DISEASES (Continued from page 30)

Kleentek of LCP 82-89 during the 1993 growing season. However, it was not detected in any other variety, and the company is attempting to eradicate leaf scald from LCP 82-89.

There are some additional problems with each clean seed option. Heat treatment is inconvenient. There is an indirect cost in lost time during an extremely busy part of the year. There are many things that must be considered to get good disease control and a good stand following planting. All of the factors that need to be considered are covered in a pamphlet available from your County Agent entitled "Controlling Ratoon Stunting Disease in Sugarcane". Even when all possible steps are taken to avoid problems, a poor stand will sometimes still occur. Finally, as mentioned above, there is incomplete control of RSD and little or no control of leaf scald and mosaic. This is why it is essential that heat treatment be done every year to keep RSD infection levels low.

A poor stand in the initial planting is sometimes a problem with Kleentek. The stress imposed by the additional handling and transportation and the light planting rate can result in stand problems in years when conditions are right for seed-piece rots. In varieties produced by Kleentek, the stalk number is often increased, which is a desirable trait, but a smaller stalk diameter also is typical. There have been questions about whether varieties produced by Kleentek are more susceptible to diseases. Rarely, a plant of CP 70-321 with susceptibility to smut, known as an "off-type", occurs and is then increased. This results in a portion of a field with a high incidence of smut. However, in experiments comparing varieties produced by Kleentek to original material

for reactions to smut and red rot, susceptibility levels have been the same. As mentioned above, Kleentek seedcane of susceptible varieties may contain a small amount of smut or mosaic.

Expense was not listed as a problem for either clean seed option; although, many growers consider this to be a problem. Disease management decisions should be based on a cost/benefit analysis – a comparison of the costs of possible control methods and expected benefits that would result from disease control. It is difficult to determine all of the costs associated with heat treatment. The late Art Heagler felt the total costs of heat treatment were now significantly less than the cost of Kleentek. The cost of Kleentek is known, so it can be used for a cost/benefit analysis.

The cost of the cane that would have been used for seedcane (cane that can then be sent to the mill instead) should be subtracted from the cost of Kleentek. We will use a simplified cost figure of \$350 for Kleentek seedcane to plant one acre for an example. Assuming the cane from a one acre initial planting was used to plant five acres, the extra value of the cane grown on that five acres would be \$70 per acre. There would not be two options. If the cane grown on the five acres is shipped to the mill, an extra yield of less than four tons of cane per acre over a three-year crop cycle would be needed to offset the seedcane purchase cost. If the cane grown on the five acres is used as seedcane (a second increase) to plant 25 acres, the extra value of the cane on that 25 acres would be \$14 per acre. With this twoincrease approach, it would then require less than one extra ton of cane

(Continued on page 32)

MANAGING SYSTEMIC SUGARCANE DISEASES (Continued from page 31)

per acre over a three-year crop cycle to offset the original seedcane purchase cost.

The benefits to be obtained from a clean seed program is that varieties will be unhindered by systemic diseases and yield up to their full potential. RSD is our most damaging disease. The amount of yield loss caused by RSD depends on how many stalks are infected, the crop cycle year, and crop growing conditions. Benefits of growing RSD-free cane, determined from experiments comparing yields of completely RSD-infected and RSD-free cane in different varieties. have ranged from 11 to 24 tons for a three-year crop cycle. Based on this cost/benefit analysis, it is obvious that money spent on a clean seed program is a good investment. The return on investment will be best for a program employing two seedcane increases. However, this will be true only if the seedcane remains "clean".

The example presented is based on an important assumption, that the clean seed remains free or nearly free of disease. The second part of a clean seed program concerns how to grow and increase seedcane and prevent or keep infection levels low. There are multiple considerations for operation of a clean seed program, including selection of



seedcane for heat treatment, amounts of clean seed needed of each variety, number of increases and planting ratios, methods for sanitary handling of seedcane, and monitoring diseases.

When heat treatment is the option for obtaining clean seed, a first consideration is the selection of cane for treatment. This should be the best cane on the farm. Since heat treatment does not provide complete control of RSD, it is essential that cane with little or no infection be selected for treatment. Cane with no recent history of heat treatment should not be considered clean seed after only one treatment. Whatever amount of infection that remains after treatment will begin to increase again. To successfully control RSD with a heat treatment program, cane that has recently been heat treated should be treated each year.

New clean seed sources of desired varieties should be established every year. The decisions to be made are how much to plant of different varieties and how many times to increase the initial seedcane. This will depend on the acreage that needs to be planted each year and what planting ratios are obtained. A maximum of two seedcane increases should be allowed. This could include seedcane cut from first stubble of an initial planting of clean seed. Any seedcane that has been increased more than twice (more than two harvests) should no longer be considered clean seed. This is a common mistake made by farmers.

There are no visible symptoms of RSD. Infected cane just does not grow as well as noninfected cane. The disease can be unknowlingly introduced if it is not already there, and then it is

(Continued on page 33)

MANAGING SYSTEMIC SUGARCANE DISEASES (Continued from page 32)

unavoidably spread. Research has shown that rates of spread vary among varieties. The newer varieties are very susceptible to yield loss caused by RSD. They also may be susceptible to high rates of disease spread. This makes it more difficult to control RSD with a clean seed program. Again, it is risky to increase seedcane more than two times.

Clean seedcane represents a considerable investment. An important part of the operation of a clean seed program is the use of good sanitation practices to prevent or minimize the reinfection and spread of RSD or leaf scald. The pathogens that cause these diseases are in the sap, and sap can be transmitted from plant to plant on equipment. The pathogens increase in number in the stalks during the season, so the harvester is the most important means of spread, particularly for RSD. The pathogens in sap on exposed surfaces will die; however, they can persist for some time. Previously, we have suggested that RSD bacteria will no longer be present on equipment left overnight. Recent evidence suggests this may not be true for RSD, and the bacterium that causes leaf scald can definitely persist for longer periods on surfaces.

During the planting season, good sanitation is easier to accomplish since only seedcane sources are being cut. Whenever possible, first-increase seedcane should be cut before secondincrease seedcane. Sometimes of necessity, some cane that is not the first or second increase from clean seed must be cut and used for seedcane. If this happens, the harvester should then be cleaned before cutting any other seedcane. During the grinding season, cleaning the harvester whenever possible is a desirable precaution. How should the harvester be cleaned? A thorough washing with pressurized water will remove the debris and sap and most, but not all, of the pathogen. Washed surfaces should then be disinfected with Lysol. A 5-10% solution works well. It can be mixed in large containers then transferred and applied with a pump-up garden sprayer to all surfaces that come in contact with the cane.

Managing RSD would be easier if infection levels in different fields were known. As a result, considerable research has focused on developing tests or assays to detect RSD-infected stalks. It has been difficult to develop an assay that will be reliable at the start of the planting season in Louisiana. Growers would like to have infection level information early in August, but the pathogen does not build-up to readily detectable levels until September. In addition, there is a sampling problem. If the infection level is low, say 10% of the stalks are diseased, and the disease is not evenly distributed in the field, how many stalks must be sampled and from where in the field to accurately estimate the infection level? Research continues on these problems. An assay for RSD is currently available through consulting firms. How can this or any other assay best be used in Louisiana? Samples tested during early to mid-August may underestimate RSD infection levels. Failure to detect RSD in samples collected during August should not be considered proof that a field is free of RSD. Any positive detection of RSD is useful information for disease management. However, the best way to use an RSD assay is to test, during September or later, different types of cane, including

(Continued on page 34)

MANAGING SYSTEMIC SUGARCANE DISEASES (Continued from page 33)

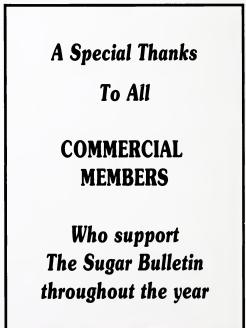
seedcane sources and cane for the mill in plant cane and various stubble crops. These test results will inform you about the status of RSD on your farm, and it will tell you how well your clean seed program is working. Keep in mind that any infection level detected by an assay will be increased by each subsequent cutting. In the absence of monitoring, the only sure way to avoid losses is to assume the disease is there. The same clean seed program operating procedures should be in practice whether there is monitoring or not.

This article has reviewed the scientific and economic reasons for a clean seed program and how one should be operated. The economic environment in which the Louisiana sugarcane industry operates is currently stable. However, there are a number of changes that



could occur that would result in lower prices and increased competition. The physical environment is a proven, continual threat to sugarcane productivity in Louisiana. Many growers seem uneasy about the future and want to know how to become more efficient.

A properly run clean seed program is a cost effective method to reduce the incidence of systemic diseases and increase production efficiency. There is a strong interaction between environmental stress conditions and disease. Each makes the effect of the other worse. A clean seed program reduces losses to diseases, and healthy cane is able to withstand the occurrence of stressful environmental conditions. Mr. Llovd Lauden would provide a simple translation of all this: a clean seed program will make you more money. In fact, adoption of a vigorous clean seed program may be essential to your future well-being as a sugarcane farmer.



OUTFIELD VARIETY TESTS

varieties are documented at the time of harvest and visual ratings of scrap (cane not placed on the heap row) are recorded. Chart 1 summarizes the harvestability data by showing the percent of observations where scrap was observed. The amount of scrap for each variety is categorized as "None", "Little to Some" or "Much to Very Much". The two unreleased varieties, L 88-46 and L 88-63, had the most plots with observed scrap. Of the commercial varieties, CP 79-318 and LCP 85-384, had the most plots with observed scrap.

The Louisiana Sugarcane Variety Program would like to express apprecia-

(Continued from page 16)

tion to the growers and their personnel for the assistance in planting and harvesting these tests.

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	Plant Cane		First Stubble		Second Stubble	
Location	Planted 1992	Harvest 1993	Planted 1991	Harvest 1993	Planted 1990	Harvest 1993
Light Soil						
Bon Secour ¹	10/08	12/03	10/03	11/03	10/02	10/19
Cinclare 1	09/18	11/22	09/30	11/19	10/11	10/27
F. Pearce ¹			09/18	11/18	10/09	11/18
Georgia ²	10/15	12/13	10/08	11/08	10/11	10/18
Glenwood ²	10/12	12/02	09/26	11/02		
Lanaux 1	10/13	12/06	10/10	11/04	10/25	10/21
R. Hebert ³	10/13	12/01	09/27	11/01	10/04	11/01
St. John ³	10/01	12/01	09/20	11/17		
Heavy Soil						
Allain 3	10/07	11/30	09/30	10/27	09/05	10/26
Evan Hall ¹		·····	10/03	11/22	08/27	
Magnolia ²	10/20	11/23	10/07	10/25	10/01	10/25
Oaklawn 3	10/02		09/17	10/28	09/06	10/20
Palo Alto 1	10/01	11/29				

 Table 1. Dates of planting and harvest dates for 13 outfield locations during

 1993 in the plant-cane, first-stubble and second-stubble crops.

¹ = Mississippi River area

² = Bayou Lafourche area

³ = Bayou Teche area

OUTFIELD VARIETY TESTS

	Sugar per	Yield per	Sugar per	Stalk		
Variety	Acre (lb.)	Acre (tons)	Ton (lb.)	Weight (lb.)	Population (no.)	
Plant-cane at 7 locations						
CP 65-357	5916	23.0	258 +	2.38	19659	
CP 70-321	5331	21.6	248	2.51	17393	
CP 72-370	6195 +	24.5	253	2.28—	21574 +	
CP 74-383	5698	24.7+	231 –	2.34	21127 +	
LCP 82-89	5007	20.3	246	2.45	16757	
LHo 83-153	5679	23.4	243	2.24 –	21162+	
LCP 85-384	6103	22.7	269 +	2.14 –	21138+	
HoCP 85-845	6040	24.4	248	2.32 –	21111+	
LCP 86-454	5665	22.6	250	2.99 +	15264	
LCP 87-17	4792	20.3	237 –	2.28 –	18023	
L 88-46	6010	24.3	249	2.13 –	23039 +	
L 88-63	4815	20.7	234 –	2.03 –	20488 +	
CP 88-739	5619	19.9	283 +	2.41	16576	
CP 88-769	6446 +	25.7 +	253	2.39	21505 +	
MSD	772	3.0	9	0.18	2440	
	First-stub	ble at 8 lo	ocations			
CP 65-357	5266	22.2	236	2.13	21011	
CP 70-321	5458	22.1	243	2.16	20747	
CP 72-370	5902	23.5	249	2.00 -	23848 -	
CP 74-383	5593	25.0+	224 –	1.91 –	26216+	
CP 79-318	6158 +	24.4 +	252	2.11	23228 +	
LCP 82-89	5986	25.2+	237	1.96 –	26067 +	
LHo 83-153	5677	24.3	231 –	1.88 –	25946 +	
LCP 85-384	8007 +	30.9 +	259 +	1.83 –	34357 +	
HoCP 85-845	6065	26.0+	234	2.03 –	25797 +	
LCP 86-454	6031	24.9+	242	2.55 +	19740	
LCP 87-17	5728	25.2+	227 –	1.96 –	25814 +	
MSD	624	2.3	12	0.13	2131	
	Second-stu	ubble_at_6	locations	_		
CP 65-357	5311	23.6	222	1.96	24299	
CP 70-321	5860	24.2	235	2.02	24047	
CP 72-370	6177	24.4	247	1.89	25705	
CP 74-383	6057	28.0+	214 –	1.79 –	31419 +	
CP 79-318	6413	28.2+	224	1.82 –	31000 +	
LCP 82-89	5788	25.8	220 –	1.76 –	29825 +	
LHo 83-153	5539	25.6	211 –	1.75 –	29129+	
LCP 85-384	8076 +	32.5 +	246	1.59 –	41110+	
HoCP 85-845	5968	25.6	228	1.76 –	29210+	
LCP 86-454	6553	27.3 +	235	2.34 +	23404	
MSD	709	2.9	13	.14	3322	

Table 2. Combined analyses of outfield tests on light soil during 1993.

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at .05 P, respectively. (Continued on page 37)

THE SUGAR BULLETIN

OUTFIELD VARIETY TESTS

(Continued from page 36)

	Sugar per	Yield per	Sugar per		Stalk	
Variety	Acre (lb.)	Acre (tons)	Ton (lb.)	Weight (Ib.)	Population (no.)	
Plant-cane at 3 locations						
CP 65-357	6647	28.7	235	2.44	23793	
CP 70-321	5965	26.0	232	2.56	20589	
CP 72-370	6106	24.5	250	2.35	20860	
CP 74-383	6028	26.5	231	2.32	23078	
LCP 82-89	6185	26.2	240	2.57	20502	
LHo 83-153	5832	25.9	226	2.12 –	24830	
LCP 85-384	6602	26.5	251 +	2.15 –	25637	
HoCP 85-845	6242	27.4	231	2.40	23105	
LCP 86-454	6727	28.8	237	2.88 +	19908	
LCP 87-17	5680	26.6	217	2.22 –	23965	
L 88-46	5842	24.9	238	2.14 –	23564	
L 88-63	5567	25.7	217	2.17 –	23697	
CP 88-739	6662	26.6	253 +	2.61	20394	
CP 88-769	5833	23.9	248	2.32	20655	
MSD	NS	NS	18	.25	NS	
First-stubble at 4 locations						
CP 65-357	5381	20.8	262	1.95	21788	
CP 70-321	5002	19.7	256	2.01	19802	
CP 72-370	5506	20.9	267 +	1.86 –	22265	
CP 74-383	5471	22.4	246	1.72 –	26548 +	
CP 79-318	5572	21.0	266	1.90	22255	
LCP 82-89	6070 +	23.6 +	262	1.77 –	26403 +	
LHo 83-153	6144 +	24.7 +	251	1.79 –	28398 +	
LCP 85-384	7236 +	26.7 +	272 +	1.63 –	32820 +	
HoCP 85-845	5081	20.8	247	1.78 –	23505	
LCP 86-454	6304 +	25.0+	254	2.23 +	22300	
LCP 87-17	5694	23.9+	243 –	1.81	26117+	
MSD	832	3.1	11	0.14	3810	
Second-stubble at 3locations						
CP 65-357	4533	18.2	253	1.78	20342	
CP 70-321	4795	20.0	243	1.83	21606	
CP 72-370	4223	17.2	251	1.68	20463	
CP 74-383	4945	21.4	236	1.71	25221	
CP 79-318	3808	17.0	239	1.87	17722	
LCP 82-89	5067	21.0	248	1.81	23445	
LHo 83-153	4975	20.8	246	1.66	24985	
LCP 85-384	5450	21.8	258	1.60 –	27924	
HoCP 85-845	4990	20.7	242	1.70	24154	
LCP 86-454	4614	20.2	236	2.11+	18905	
MSD	NS	NS	NS	0.19	NS	

Table 3. Combined analyses of outfield tests on heavy soil during 1993.

(+) or (-) denotes yields which are statistically higher or lower than CP 70-321 at .05 P, respectively. (Continued on page 39)

JULY, 1994



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ENVIRONMENTAL PERSPECTIVE (Continued from page 18)

the amounts of residues generated per ton of cane processed varies from mill to mill depending on local farming, transportation, and processing conditions and practices, and most mills will need to make detailed observations and measurements during the 1994 season to determine that existing and proposed facilities will be adequate for implementation of the BMPP in 1995 and beyond. The answers to the most obvious questions raised are as follows:

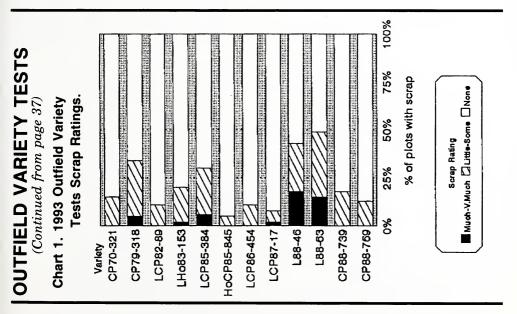
> An original plan (BMPP) submittal is not expected by LDAF to be "chiseled in stone." If observation and experience during 1994 operations indicate existing or planned facilities or procedures are not adequate, the plan can and should be amended promptly for approval by LDAF.

> If a mill's BMPP cannot be submitted and/or approved by LDAF before 1994 start-up, it should be submitted as soon as practicable.

The LDAF system calls for an approved BMPP to be available at each mill, implying that an approved plan should be in effect as soon as possible, but does not prohibit mill operation prior to receipt of formal LDAF approval.

The LDAF system expects BMPPs to be implemented in full during the 1995 harvest. If needed construction cannot be completed before the 1995 harvest, the BMPP should identify alternative interim measures to provide adequate environmental protection.

The same environmental protection standards applicable during the 1993 crop apply during the 1994 season. Simply stated, a factory must comply with all air and water discharge permit conditions including those for storm water runoff, and residues must be handled in a way that does not cause objectionable odors or other nuisance for neighbors.



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The Sugar **Bulletin**

OFFICIAL BULLETIN OF THE AMERICAN SUGAR CANE LEAGUE OF THE U.S.A.

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We stand for the encouragement of Home Industries as against Foreign Competition

Vol. 72 - No. 11

AUGUST, 1994

The Sugar Bulletin

The Official Organ of the American Sugar Cane League of the U.S.A., Inc.

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UP FRONT WITH THE LEAGUE By Charles J. Melancon

Just recently, I was approached by a grower at the Farm Bureau Convention who appeared to be somewhat upset by the report in the Sugar Cane Commodity Section of the convention. He felt that the report that was given was not optimistic and upbeat; and, as a matter of fact, he felt that the report that was given at that meeting was very pessimistic.

Having held an elected office, I found that the general public's opinion of elected officials is that "they lie;" and during that time, I came to the realization of why that perception of politicians is held. The individuals discussing issues with their leaders always feel that their side of the issue is the right and correct side, thus the reason for talking with the elected person. The general public feels that the elected official should support their view. All too often I witnessed elected officials trying to diplomatically tell their constituents their opinion was not necessarily the reality of the situation. Often times, many of these politicians were put into a position, when the subtle suggestions were not accepted, to either agree with the constituent to make him happy or directly attack the issue and tell him concisely how the cow really ate the cabbage.

I am no longer an elected office holder, but I feel that I am viewed as a leader in this industry; and consequently the same phenomenon exists, that of some people wanting you to tell them the truth, but only if the truth is what they really want to hear. As a former public figure, and now as General Manager of the League, I must let you know that I do not intend to paint a false image of the real situation.

As I mentioned to this grower, as he expressed his disappointment in the lack of optimism in the report, it would be important for him to have gone to all of the commodity groups' reports to find that agriculture, and every commodity within agriculture, has a lot of the same common problems as does sugar. As we move towards the 1995 Farm Bill, I along with the League leadership, the Washington representatives, and other Capital Hill watchers are continuing to monitor the goings-on in Washington. I can't gloss over the fact that the environmentalists perceive that the people in agriculture have not been good stewards of the land. Nor can I gloss over the fact that the commercial users of our products would like for the Congress to believe that they will always be able to get a cheaper supply of our products from outside of this country. Nor can I gloss over the fact that our opponents in the Congress, who will never vote to reduce entitlements that are costing this country hundreds of billions of dollars a year, would ever support the agriculture community. As an industry, we provide the American public a stable. safe supply of reasonably priced goods? It does no one good to have money but no food to purchase. Entitlement programs need agriculture so there is product to purchase.

I came to work in this industry with an optimistic attitude and it is one that I still hold. I do not anticipate the demise of the sugar industry, or that of agriculture in general, at any time in

(Continued on page 23)

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WASHINGTON UPDATE WITH DON WALLACE

GATT UPDATE

On July 14 the House of Representative's Ways and Means Committee had a "walk-through" of the administration's draft implementation legislation as amended by the Trade Subcommittee in June. Action at the full committee level in the form of a mark-up has been scheduled for July 20.

The Senate Finance Committee is scheduled to consider the trade pact beginning July 19. The House Agriculture Committee has scheduled its mark up for July 26. To date no action has been scheduled by the Senate Agriculture Committee.

Clinton administration officials, in a closed door session before the "walkthrough," outlined a funding package for the Uruguay Round trade pact which amounted to \$12.8 billion in revenue offsets. Most of the Senate and House Democrats said that the package was credible and workable, but no final agreement has been reached. On June 27 in Chicago, Illinois, U.S. and Canadian negotiators failed to resolve the farm trade dispute after 11 hours of negotiation. Both countries put proposals on the table, but there was no indication from U.S. Trade Representative Mickey Kantor that the proposals contained anything new. Since last fall, the two countries have held at least four high level sessions on wheat, dairy, sugar, poultry and peanut products. No future meeting was set.

CROP INSURANCE REFORM

The Senate Agriculture, Nutrition and Forestry Committee voted on June 22 to reform the crop insurance system. The "Federal Crop Insurance Reform Act of 1994" was announced by Agriculture Secretary Mike Espy on March 2. He stated that the proposal would save approximately \$750 million during a five year period by eliminating the need for ad hoc disaster relief bills that have cost an average of \$1 billion per year since 1986. The bill reported by the Senate would save about \$440 million over five years. There were no amendments offered, and the bill closely resembles the administration's proposal. The main principles of the act are:

- Expanding participation in the federal crop insurance program by providing catastrophic, low-cost crop insurance coverage to all farmers:
- Providing incentives to farmers to buy higher levels of crop insurance coverage, thereby reducing the need for annual disaster bills; and,
- Expanding the types of crops currently covered by the federal crop insurance program thus increasing participation in the program nationwide.

On June 30 the House Agriculture Subcommittee on Environment, Credit, and Rural Development approved the crop insurance reform bill with amendments. Chairman Johnson (D-SD) offered an amendment which would bring legislation into compliance with the budget rules. A constant point of debate between members of Congress and farm groups was a \$500 million funding shortfall for the bill over 5 years, a result of earlier action by the Appropriations Committee. Full committee consideration has not been scheduled.

USDA REORGANIZATION PASSED BY HOUSE AG

The House Agriculture Committee passed the USDA reorganization bill along a party-line vote of 27-21. The Senate passed similar legislation earlier this year.

(Continued on page 14)

FARM NOTES By Dr. Charley Richard VARIETIES TO PLANT IN 1994, WHERE TO PLANT THEM AND KEEPING THEM CLEAN — ASULOX COST — CROP REPORT

The variety recommendations for 1994 have been prepared and are available in booklet form from the Louisiana Cooperative Extension Service. They also include recommendations on planting times, furrow widths, planting rate, soil cover, depth of planting, succession planting, weed control at planting and soil insect control. This booklet provides you with all the technical information one should need in making planting decisions.

Last year League Agronomists prepared a chart similar to the one shown below that growers could use to help them decide which fields on their own farms were best suited to each variety. The chart was well accepted and we have prepared another for 1994. This chart takes into account characteristics about the recommended varieties and suggests where it would be best to plant each variety. This chart should not be used to indicate that a particular variety

cannot be grown on a certain soil type. Instead, it should be interpreted as indicating where a variety is best suited because of some of the characteristics about that variety. For example, varieties which resist deterioration following a freeze are normally better suited to the sandier soils which are usually harvested later in the year when cold tolerance is a more important trait. On the other hand, early maturing varieties are better suited to clay soils which growers normally want to harvest early in the season. Borer susceptible varieties must be planted away from subdivisions, public facilities and waterways while borer resistant varieties can be planted in environmentally sensitive areas. Other characteristics come into play and some are noted in the chart. For a complete listing of all of the characteristics concerning the recommended varieties as well as all other planting information, the variety recommendation booklet should be consulted.

(+ means a positive or good characteristic while - means a negative or bad characteristic)					
VARIETY	CHARACTERISTICS TO CONSIDER		SOIL TYPE		
CP 72-370 CP 79-318	+ MATURITY, - COLD TOLERANCE + MATURITY, - HARVESTABILITY	HEAVY HEAVY	MIXED MIXED		
CP 65-357	+ COLD TOLERANCE, + HARVESTABILITY, + MATURITY	HEAVY	MIXED	LIGHT	
LCP 82-89 CP 70-321	+ HARVESTABILITY, + MATURITY - PRODUCTIVITY ON HEAVY SOIL,	HEAVY	MIXED	LIGHT	
LHo83-153	+ COLD TOLERANCE – MATURITY, + BORER		MIXED MIXED	LIGHT LIGHT	
EXPANSION VARIETIES					
LCP85-384 HoCP 85-845 LCP 86-454	– BORER, – HARVESTABILITY – LEAF SCALD, – HARVESTABILITY – STANDS, – SHADING		MIXED MIXED MIXED	LIGHT LIGHT LIGHT	

FIELDS BEST SUITED TO THE RECOMMENDED VARIETIES

(Continued on page 18)

THE SUGAR BULLETIN

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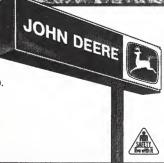
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THE BATON ROUGE LINE By Tom and Linda Spradley

SPECIAL SESSION

Called by Governor Edwards to deal with "crime and education" issues, the recently adjourned Special Session in actuality dealt more with a potpourri of matters ranging from school prayer to prevailing wage. The announcement by Governor Edwards on the opening day of the session that he would not seek reelection served as a death knell for his crime package, and resulted in a session that saw high levels of activity — and, at times, chaos — but few results. Certainly none of a positive vein.

The only positive news comes from those bills that were successfully killed. Labor and the Governor attempted to reduce unemployment compensation taxes while increasing benefits, which, would most certainly have returned us, sooner or later, to a bankrupt UC fund where employers would have once again had to ante up to get the fund back in the black.

Additionally, a move by the Governor and labor to re-enact the state's prevailing wage law, which would have linked the wages paid by contractors on state jobs to the local wage base, usually the union rate, was defeated. While this bill does not immediately appear to have a direct impact on most businesses, we would have seen costs to business increase because, included in the bill in addition to state contracts, was an option for local governments to also adopt the prevailing wage.

There were no bills filed during the Special Session that directly impacted the sugar industry. However, Governor Edwards recently issued an Executive Order that reiterates his order of 1993 that allows for special harvest season permits to be issued to operators of vehicles loaded with sugarcane. Special thanks for this order should be communicated/Governor Edwards and Rep. Audrey McCain who assisted us in getting this order issued.

If you have questions or need further information on these or other issues, please call Tom or Linda Spradley at 504-766-1359.



IN THE FACTORY

Stephen J. Clarke Audubon Sugar Institute Louisiana Agricultural Experiment Station

MACROMOLECULES AND MICROSCOPES

Despite the similarity of the sound of these two items in the title, they are quite different and are treated as two separate subjects. The macromolecule that I want to discuss is starch, and the simple means that are now available to the raw sugar producer for its destruction. The microscopes refer to recent publications on their use as analytical tools.

The presence of starch in cane juice has long been known, but its prominence as a matter of concern for raw sugar producers and refiners has been more recent. The adverse effects of starch are related to its ability to form protective colloids and also to the increased viscosity of high brix materials containing significant levels of starch. The presence of protective colloids reduces the clarification efficiency and causes turbid or translucent juice and poorer settling rates. This problem is probably of less concern than the increased problems due to viscosity that are observed in the raw sugar mill boiling house, and the filtration and crystallization stations in the refinery.

Some starch is inevitable with cane but the levels are usually low enough not to be of concern. Starch levels high enough to cause problems are more likely with some varieties and when cane leaves and tops are brought in with the cane. The mill often has little control over these factors, unlike the case of dextran where good control of harvesting, delivery schedules and mill sanitation can greatly minimize its effect. The impact of starch is on both the quality of the raw sugar produced and the level of exhaustion of molasses; and therefore, the recovery.

Although the subject has been raised none of the refiners have any plans to institute a starch penalty analogous to the dextran penalty. In any case, the financial impact of starch on the raw sugar mill is far greater in the low grade operations than there would be for a raw sugar quality penalty. C-Massecuites with reduced viscosity due to starch removal can be boiled in less time, cured better on the centrifugals, and gives molasses purities several points lower than with no treatment for starch. For these reasons the mill should make the use of the starch degrading enzyme, amylase, a routine matter. Heat stable and inexpensive enzyme is commercially available and should be routinely applied in process, usually in the latter stages of the evaporator. The cost is low, only a few cents per ton of cane processed. A Louisiana mill that regularly achieves much better than average molasses exhaustion uses amylase on a routine basis.

It is unusual that two papers should appear in the same month and in quite different journals that deal with the same subject — the use of optical microscopes as routine analytical instruments. Also my interest was caught earlier on one of the city tours which were part of the ICUMSA meeting in May. We passed a traditional (Continued on page 20)

HoCP 85-845 — Tough Decision

By Herman Waguespack, Jr.

As employees of the Louisiana sugar industry, every day we must make decisions that affect the industry. Whether it's an answer to a grower's question, working with researchers or planning a meeting; whether the task is simple or difficult, we are hired to do whatever it takes. The decisions are not always easy and sometimes the right course of action is met with resistance. Most of the time when all available information is taken into account, an agreement is reached. It's important to remember that we must always do what is good for the Louisiana sugar industry!

A recent example of this was deciding whether or not to distribute the promising new variety HoCP 85-845. Although this variety was released for commercial production in 1993, seedcane was not distributed because a new disease called Leaf Scald was identified at many of our Secondary Seed Increase stations. This disease was first found in Louisiana in the fall of 1992. How it got here is still somewhat of a mystery, but now that it's here precautions must be taken to limit the spread of this disease. Since Leaf Scald is spread primarily through infected seedcane and mechanically transmitted from one stalk to another by equipment (like harvesters and shavers) there is potential for rapid spread. The symptoms most often seen are thin stripes on the leaves and/or sickly plants that are stunted. These plants usually die, but may develop a short stalk. The most puzzling part about monitoring Leaf Scald is that infected plants don't always show symptoms so it is difficult to tell if cane is infected or not. Obviously this presents a

problem when working with seedcane of new varieties.

Our commercial varieties seem to have some resistance, but there are still many unanswered questions about leaf scald and it's impact on the Louisiana sugar industry. This, I suppose, is the underlying fear — the unknown. Nevertheless, it is disturbing to know that we have a new variety that has passed all the tests with favorable marks, and ready for distribution to the industry, yet we can't send it out!

In 1993, leaf scald was identified in HoCP 85-845 at more than 25% of the secondary stations. This was reason enough to cancel distribution for 1993 and hope that a concentrated effort to rogue and increase a portion of the seedcane would allow distribution in 1994. But, we are now finding leaf scald symptoms at secondary stations that supposedly didn't have the disease last year! This presents a real obstacle because there appears to be such a low level of infection that symptoms are not being expressed until late in the season and are hard to detect. Some may say that the right course of action is to gamble on the fact that low levels of the infection may not hurt, and that the variety has enough potential that it can help the industry. This variety certainly has good potential, but gambling with a new disease that is not yet spread throughout the industry is dangerous, especially with the limited knowledge about it's impact on our present commercial varieties. The decision was not an easy one, but putting the facts together, it is clear that distributing the available seedcane of HoCP 85-845 at

(Continued on page 22)

THE SUGAR BULLETIN

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Environmental Perspective

James F. Coerver, P.E. Gulf Engineers & Consultants, Inc.

POLLUTANT EMISSION TAXES

A reminder of the ever increasing cost of compliance with environmental regulations was recently mailed to sugar millers and other plant operations. The reminder came in the form of a bill from the Louisiana Department of Environmental Quality (LDEQ) of \$7.00 for every ton of "criteria" air pollutants emitted during calendar year 1992. This "tax" on air pollutants emitted is very popular with the environmentalists, and according to the Federal Clean Air Act Amendment of 1990, must soon be increased to at least \$25.00 per ton. In fact, LDEQ has already promulgated rules (Louisiana Register, November 1993) raising these fees to \$9.00 per ton for emissions during calendar year 1993.

The average size Louisiana sugar mill, burning about 150,000 tons per vear of bagasse in its boilers, would be billed between \$1.700 and \$6.000 for 1992 emissions, depending on how efficiently soot emissions are controlled. This charge is in addition to the fees LDEQ assesses for emission permits and annual permit renewal. Fortunately, LDEQ has resisted imposing the full \$25.00 per ton emission tax on the basis that other permit fees currently make up the difference. However, it is inevitable that emission fees will rise to at least the \$25.00 level. Therefore, it seems appropriate to see what can be done now to minimize future expenses. and of course to reduce pollutant emissions wherever possible.

The "criteria" pollutants that are assessed an annual, per-ton emission fee (tax) are: particulate matter smaller than 10 microns in size (PM-10); nitrogen oxides (NO_x) ; sulfur dioxide (SO_x) ; and none-methane none-ethane volatile organic compounds (NM/NE VOC). Because bagasse contains very little sulfur, LDEQ does not bill mills for sulfur oxide emissions.

One of the major problems in managing or controlling fees for PM-10 emission is lack of information. No one, to my knowledge, has done a stack test at a Louisiana sugar mill to measure actual PM-10 emission rates, and there are no U.S. Environmental Protection Agency (USEPA) approved methods for estimating PM-10 emissions from bagasse fired boilers. Testing for PM-10 emissions is much more expensive than testing for total particle emissions (PM). and only the new or improved boilers have been tested for PM emissions. Therefore, sugar mills ordinarily report boiler annual PM emissions by estimations based on the USEPA approved emission factor (two pounds of particles per ton of bagasse combusted) reduced according to the rated efficiency of any particle emission control system used on the individual boilers. Because of the lack of specific information on PM-10 emissions. LDEQ bills for PM-10 emissions at 50 percent of the reported PM emissions (which is obviously a better deal than considering all particle emissions as "PM-10" unless proven otherwise).

As intended by the Clean Air Act Amendments, the "tax" burden falls most heavily on bagasse boilers that are (Continued on page 13)

THE SUGAR BULLETIN

ENVIRONMENTAL PERSPECTIVE (Continued from page 12)

not equipped with efficient flue gas clean-up systems. For instance, at the \$25.00 per ton tax rate, a boiler burning 50,000 tons per year of bagasse would be billed \$2,500 whereas a comparable boiler equipped with a "99 percent efficient" flue gas hydroscrubber would be billed only \$50.00 per year. Because all new boilers and eventually all existing boilers must be equipped with efficient particle control systems, industry emphasis should be on finding most economical and dependable means of installing and operating flue gas scrubbers and proving (to LDEQ) low total PM emission from all boilers of the class operated in Louisiana.

Technology also exists for achieving significant reduction in NO_x emissions from boilers. There has been some reluctance to use this technology in the sugar

industry because many of the techniques cause a corresponding increase in carbon monoxide emissions. However, LDEQ does not charge annual fees for carbon monoxide emissions, and because there is no local problem with carbon monoxide, ordinarily approves requests for permit adjustments resulting in significantly reduced NO_x emissions.

At modern sugar mills, most of the annual emissions tax bill is for volatile organic compounds. Sugar mills estimate and report VOC emissions based on USEPA's emission factors that indicate "hydrocarbon" emissions from bagasse boilers is two pounds per ton bagasse burned. The term "hydrocarbons" includes methane and ethane, two VOC compounds which are exempt from the annual emissions tax. Futhermore,

(Continuedon page 24)



AUGUST, 1994

WASHINGTON UPDATE

The House version includes:

- Authorizing Espy to proceed with his plans to close or consolidate 1,200 field offices;
- Creating an Agricultural Service Agency, responsible for the combined functions of the current Agricultural Stabilization and Conservation Service, Federal Crop Insurance Corporation and the Farmers Home Administration; and
- Allowing the Secretary to establish a single Natural Resources Conservation Service to administer virtually all farmrelated conservation programs.

The House of Representatives was scheduled to consider this bill on the House floor, but voting was postponed due to problems that arose from an

(Continued from page 5)

amendment adopted at the committee level to establish an Office of Environmental Risk at USDA. This amendment would establish an Office of Environmental Risk to examine environmental regulations and require cost-benefit analysis for new regulations. This amendment received much criticism by members outside the committee and is opposed by environmentalists.

The bill will now have to go to the Rules Committee and through the "regular" amending process on the floor. This bill will likely be considered before the August recess.

Agriculture Appropriations Passed By House

The House of Representatives approved the Agriculture Appropriations

(Continued on page 15)



WASHINGTON UPDATE

bill by a vote of 278-127. The bill allocates \$1.7 billion for foreign aid and export programs, a decline of \$200 million from fiscal 1994's appropriation of \$1.9 billion. Overall the House agreed to appropriate \$67.9 billion for USDA, \$4.2 billion less than fiscal 1994 appropriations and \$535.9 million less than President Clinton's request for the agency.

The only spending increases were for the Women, Infants and Children program, the Food Stamp Program and the Food and Drug Administration.

The Senate has completed subcommittee and full committee approval of the bill, and is now awaiting floor action. The Houma, Louisiana Agriculture Research Station was included as one of the five stations to be funded for fiscal year 1995 in the Senate Agriculture Appropriations Subcommittee markup.

USDA ANNOUNCES MARKETING ALLOTMENTS UNNECESSARY

USDA announced on July 5 that sugar marketing allotments were unnecessary for the remainder of the fiscal

(Continued from page 14)

year 1994. This determination was reportedly based on June estimates of the U.S. sugar situation and the outlook for the remainder of the fiscal year 1994. U.S. Agriculture Secretary Mike Espy's office stated that an estimate of sugar imports for FY 1994 would exceed the 1.25 million short ton trigger level for establishing marketing allotments on a quarterly basis, but under law is not required to announce their decision before the beginning of the fiscal year in October.

USDA ANNOUNCES WORLD AGRICULTURAL SUPPLY AND DEMAND ESTIMATES

The U.S. sugar production in fiscal year 1994/95 is projected at 7.70 million short tons, raw value, up 30,000 tons from last month, and 2.5 percent higher than 1993/94. The revised forecast is based on sugar beet and sugarcane estimates released June 30 in USDA's Acreage report. For 1993/94, revisions in trade data result in a slight increase in ending stocks.

(Continued on page 16)

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WASHINGTON UPDATE

(Continued from page 15)

	0.01	erer eugar euppry and ecc				
Item	1992/93	1993/94	1994/95 Projections			
		Estimate	June	July		
	1,000 short tons, raw value					
Beginning stocks ² Production ² Beet sugar ³ Cane sugar ⁴ Imports ² Under quota ⁵ Other ⁶	1,450 7,773 4,392 3,381 2,039 1,335 704	1,673 7,510 4,050 3,460 1,760 1,105 655	1,218 7,670 4,300 3,370 NA NA NA	1,223 7,700 4,350 3,350 NA NA NA		
Total supply Exports ² ⁷ Domestic deliveries ² Domestic food use Other ⁸ Miscellaneous ⁹ Use, total Ending stocks ²	11,262 486 9,063 8,900 163 40 9,589 1,673	10,943 570 9,150 9,015 135 0 9,720 1,223	NA 540 9,275 9,100 175 0 9,815 NA	NA 540 9,275 9,100 175 0 9,815 NA		
Stocks to use ratio	17.5	12.6	NA	NA		

WASDE-292-11

U.S. Sugar Supply and Use 1

¹ Fiscal years beginning Oct. 1. Puerto Rico not included.

² Historical data are from ASCS, "Sweetener Market Data."

³ Forecast for 1994/95 is based on the June 30 "Acreage" report. Forecasts of percent of area harvested and beet yield are equal to 1989-93 averages excluding the high and low years. Sugar recovery from beets — excluding net additional sugar from desugarization of molasses — is the projected linear trend of 1982-93 recoveries. Net additional sugar from molasses is forecast at 235,000 STRV.

⁴ Forecast for 1994/95 mainland is based on the June 30 "Acreage" report; and forecast percent of cane harvested for sugar, sugarcane yields, and sugar recovery from cane equal to the 1989-93 average excluding the high and low years for each state. Hawaii forecast is based on information from knowledgeable sources.

- ⁵ Actual arrivals under the tariff rate quota with late entries and quota overfills assigned to the fiscal year in which they actually arrived. Estimated imports under quota in 1993/94 assume a shortfall of 60,000 tons from the 2-year, 2.5 million STRV quota for 1992/93 and 1993/94. The quota for 1994/95 has not been announced.
- ⁶ Quota exempt imports (for reexport, for polyhydric alcohol, from Canada, and high-duty).
- 7 Mostly reexports and shipments to Puerto Rico.
- ⁸ Transfer to sugar containing products for reexport, for nonedible alcohol, and feed.
- 9 Residual.

USDA RELEASES SWEETENER MARKET DATA REPORT FOR APRIL 1994

The USDA'S Commodity Credit Corporation released its Sweetener Market Data report for April 1994. The Report totals in short tons include:

- April 1, 1994 beginning sugar stocks 3,979,615.
- U.S. beet sugar production for April 1994 166,360
- U.S. cane sugar production for April 1994 76,978
- Deliveries for April 1994 669,889, including deliveries for domestic human consumption — 654,613
- April 30, 1994, ending sugar stocks 3,640,200

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FARM NOTES (Continued from page 6)

It should be noted that in 1994 there are four varieties recommended for major planting: CP 65-357, CP 70-321, CP 72-370 and LCP 82-89. Two varieties are recommended for planting on limited acreage: CP 79-318 and LHo 83-153. The new varieties LCP 85-384 (distributed in 1993) and LCP 86-454 (to be distributed this fall) should be planted in areas where you can best increase the seed supply of these canes. The varieties CP 74-383 and CP 76-331 have been dropped from the recommended list for numerous reasons.

Among the four major varieties recommended for planting are the three oldest varieties that are available. This tells scientists working in the breeding program the condition growers are in with regards to a major variety. Of great concern to this industry is that CP 65-357 and CP 70-321, the two oldest varieties, still occupy the majority of the cane acreage. Because none of the newer varieties have vet surfaced as major contenders for acreage, it is extremely important to keep seed cane of these varieties as clean as possible of diseases. In the previous two issues of the Sugar Bulletin were articles concerning the use of clean seed. It is important that you understand the significance of these articles and follow them as closely as possible. It is hoped that LCP 85-384 (released last year) can become a major variety. Stands of this variety generally look good but it is recognized that it may have some problems with its harvestability and will have problems because of its susceptibility to the sugarcane borer. Despite its strong vields and

(Continued on page 19)



FARM NOTES (Continued from page 18)

stubbling ability, it like all other varieties, is susceptible to ratoon stunting disease. Clean seed of this variety will be a must if growers are to utilize it to its maximum.

ASULOX COST

In the June issue of the Sugar Bulletin, this article noted the rising prices of Asulox and fertilizer. The reasons that company officials gave for these price increases were listed. Some growers have complained that the article was not strong enough, especially with regards to Asulox prices. It has been suggested by some growers that a "boycott" of Asulox purchases or some other action be taken by the industry to demonstrate its disgust with the rising prices and the lack of concern that the company has shown for the members of this industry. It is questionable whether any such action could be taken because there are really no alternatives to this particular chemical. It is obvious that the company has the industry hostage until some other chemical can be found to replace Asulox or some other manufacturer or source of asulam can be found. In the meantime, growers continue to be placed in a price squeeze with rising costs, low yields due to poor weather and a stable price for sugar. The industry needs a "fix" and a good vield of sugarcane would help.

CROP REPORT

It was noted in earlier articles this year that this crop consisted of an unusually large amount of old stubble as a result of the large planting in 1990 following the December 1989 freeze. It was a concern that this old stubble, as is normally the case, suffers more than plant cane or first stubble from any stress factor. Some of this older stubble was cut later in the 1993 harvest season to hopefully provide a better stand this spring. Although a good stand was seen earlier in the year creating some optimism among growers, the excessive rains and lack of sunshine during June and July have slowed the growth of this stubble and it does not look as good as it did earlier. Also, grass has had an opportunity to get a good jump and it appears that this may be a dirty crop. Additionally, the plant cane cut for seed and any early cut cane for harvest during 1993 generally did not come back to a good stand this spring. A significantly large amount of acreage did not get a good lay-by treatment this spring and tievines are now apparent in many fields. The borer season seems to have been light up through this writing on July 15 but with the excessive rain over the last few weeks this may change. All factors considered, League agronomists feel that this crop is only an average yielding crop at this time.

CORRECTION:

IN THE JULY ISSUE OF THE SUGAR BULLETIN, IN THE ARTICLE ENTITLED MANAGING SYSTEMIC SUGARCANE DISEASES WITH A "CLEAN SEED" PRO-GRAM, PAGE 31, IN THE RIGHT HAND COLUMN, THE SENTENCE CONCERN-ING ART HEAGLER SHOULD READ — THE LATE ART HEAGLER FELT THE TOTAL COSTS OF HEAT TREATMENT WERE NOT SIGNIFICANTLY LESS THAN THE COST OF KLEENTEK.

FURTHER DOWN THE COLUMN, THE SENTENCE CONCERNING OPTIONS SHOULD READ — THERE WOULD NOW BE TWO OPTIONS.

IN THE FACTORY (Continued from page 9)

herbal medicine store, at which time the subject of analysis and identification of such materials inevitably came up. A public analyst from England explained that part of their routine training was the use of microscopy for this type of work. The first paper is in the International Sugar Journal, written by Jean Cleriot and entitled "Sugar manufacture seen through the microscope." The second is in American Laboratory by Walter McCrone and entitled "Using the microscope . . . for the nonmicroscopist." Microscopy is, of course, a specialized skill but both papers present much useful information without going into arcane detail.

Perhaps the sugar industry needs to look at this in a new light: the costs are not very high and no elaborate computerized data evaluation is required. Training to properly interpret the pictures is critical, but this should not be a problem. Many of the images produced also have an esthetic appeal which is lacking in the store instrumented analyses.

The paper by McCrone describes the identification of vegetable and fibrous materials based on comparison with published material. Identification of microorganisms is routine by microscopy, and chemical and physical properties; such as solubility and uniformity can be determined. It is even possible to chemically identify certain cations and anions by the shape of the micro-crystals formed when the unknown is mixed with the appropriate reagent.

The application of microscopy to the beet and refining industry in France is

(Continued on page 21)

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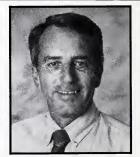
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IN THE FACTORY (Continued from page 20)

described by Cleriot. This paper is worth reading since the approach is very applicable to cane. The first topic discussed is the quality of the beet in terms of the tissue quality. It is possible to determine factors related to deterioration such as freezing and thawing, and whether permeability problems can be anticipated in the extraction of the beets in the diffuser. It is also possible to predict the performance of the juice at the purification stage and whether filtration problems can be expected.

The second topic, bacteriological conditions in extraction and processing, describes how these can be monitored by microscopy. Microorganisms are inevitably present in the juice but at a low level. The levels at which problems can occur for beets are described in some detail, and I am sure that a similar approach would be very interesting for cane.

The quality of the calcium carbonate precipitate formed in the beet purification process can be monitored with the microscope and much detail is given in the paper. There are many variables involved, many of which are not yet understood. This technique is a step towards better understanding and control. In the cane industry we know even less about the purification system and



AUGUST, 1994

perhaps this is a useful approach to better understanding what we are doing and how improvements can be made.

The last major topic in the paper is the sucrose crystal, the area of microscopy with which the sugar technologist is most familiar. Seeding, crystal growth, final massecuite tightening, the impact of mechanical stirring, cooling crystallization and centifugation are all touched upon. The wear on centrifugal screens and the formation of deposits on screens were also monitored. There are many other areas in the factory where microscopy could be applied. Examples are: determination of the soil type in harvested cane, evaporator scale characteristics, and formation of sediments in molasses and methods for their removal. Much to think about and do.



TOUGH DECISION

secondary stations in 1994 is too risky. The important thing is to remember that we must do what is good for the industry! Besides, who wants (or needs) a new disease?

Since the variety will not be officially distributed by the American Sugar Cane League in 1994, the next step is to start the seed increase procedures

(Continued from page 10)

over again. We are now planning to bring seed cane of HoCP 85-845 to the Primary Increase stations this fall. To insure that the best possible seedcane is used, the new procedures for testing each stalk for both Leaf Scald and RSD before planting will be utilized. Hopefully this will allow us to distribute this promising new variety in several years.



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UP FRONT WITH THE LEAGUE

our history. I do, however, see some changes forthcoming in this country. We may not always agree with those changes, and I hope that they will not directly or adversely impact the people I represent; but, it is necessary to realize that this world changes more and more every day and that the changes are not always to our liking. My Dad used to always tell me that life was not fair. That is particularly true of how things work in Washington. Regardless, I am optimistic that we can be successful in the next farm bill, but the truth of the matter is that no one should be glossing over the real facts of the situation. The road to '95 is a long road, strewn with many obstacles.

I guess I would liken this to being the *underdog* in a football game. We are not given much of a chance to win. The odd makers say that we could never win for whatever reasons. The game is looked upon by the fans as a game that had to be played and the only hope is that we don't get beaten up too badly.

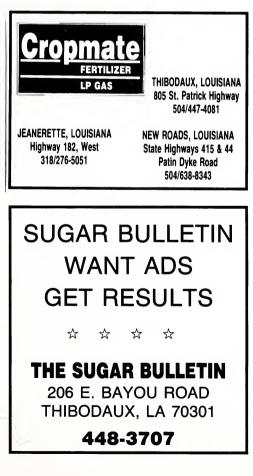
On the other hand, as one of the players, I will be on the field during the entire game. I can tell you that your team will feel satisfaction and gratification when we have pulled an upset against what appeared to be unsurmountable odds. With that, let me say

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it is necessary for you, regardless of the reports that you receive in the interim, to keep the faith. "We" as an industry have been through this procedure and process many times before and we have endured. This time is no different. For those who feel the early reports are not optimistic, this is truth; but there is much optimism uniting our team. We need for you to know the true picture. We also need your support. Keep the faith — it ain't over till the fat lady sings and we are going to be in the game 'til the very end; and, just as in the past, united. So bear with the reports, its only the truth. And you need to know the "true" facts



ENVIRONMENTAL PERSPECTIVE

(Continued from page 13)

the USEPA emission factor is based on tests at Florida and Hawaii sugar mills, burning bagasse from high wax content sugar cane content varieties. Low-wax content Louisiana bagasse is not expected to emit significant amounts for VOC because cellulose and similar carbohydrates, the principal ingredient of bagasse, do not produce hydrocarbons when combusted.

The boiler flue stack tests that have been performed at Louisiana mills did not determine how much of the total VOC emissions was due to methane and ethane, which incidentally are the principal constituents of natural gas which is sometimes used as pilot and supplemental fuel in bagasse boilers. In the absence of facts, mills are paying a high price for what I believe are emissions that never occurred. The additional cost of measuring methane and ethane at a stack test is minor and should be done.

There is an opportunity for the industry to save money (on pollution tax) and reduce both actual and suspected pollutant emissions. What is needed are facts on actual hydroscrubber performance, simple NO_x emission control techniques, and proof of actual VOC emissions at Louisiana sugar mills. Future research efforts should be Another side of the oriented. economy/pollution control situation to consider is alternative uses of bagasse. Natural gas fired boilers emit fewer pollutants and do not need expensive pollution control systems such as hydroscrubbers.

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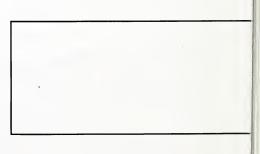
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